

**United States Department of the Interior
Bureau of Land Management
Vernal Field Office**

July 2003

**ENVIRONMENTAL ASSESSMENT
(UT-080-2000-0006)**

**Wolf Point Pipeline Project
Uintah and Grand Counties, Utah**

FACT SHEET

Project Title: Wolf Point Project

Document: Environmental Assessment (UT-080-2000-0006)

Issue Date: July 2003

Project Location: Uintah and Grand Counties, Utah

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Implementation Date: August 2003

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Abstract:

This environmental analysis (EA) has been prepared in response to a revised proposal from the Carbon Energy Corporation (USA) to install, operate, and maintain a natural gas pipeline system to connect five existing wells to the Canyon Gas Resources high-pressure gas transmission/sales pipeline. This activity is identified as the Wolf Point Gas Gathering Pipeline System Project (Wolf Point Project) and is located approximately 60 air-miles south of Vernal, in the Wolf Point gas field of Uintah County, Utah.

This EA discusses the purpose and need for the proposed action, describes alternatives that were developed, identifies potential impacts of implementing each alternative, and suggests mitigation measures. There are two alternatives considered in this EA. These alternatives are: Alternative 1 - Proposed Action and Alternative 2 - No-Action Alternative.

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2	History of Winter Ridge WSA in Relationship to the Wolf Point Project

LIST OF ACRONYMS AND ABBREVIATIONS

ATV	All-terrain vehicle
b _{ext}	Light-extinction coefficient
BLM	U.S. Bureau of Land Management
BTEX	Benzene, toluene, ethylbenzene and xylenes (collectively)
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CIAA	Cumulative impact analysis area
CO	Carbon monoxide
CO ₂	Carbon dioxide
DNM	Dinosaur National Monument
DOGM	Utah Division of Oil, Gas & Mining
DOT	U.S. Department of Transportation
DWR	State of Utah Division of Wildlife Resources
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FLPMA	Federal Land Policy and Management Act of 1976
ft	Feet
ft ²	Square feet
HAPS	Hazardous air pollutants
hp	Horsepower
IMP	Interim Management Policy for Lands Under Wilderness Review
km	Kilometer
lb	Pounds
MACT	Maximum available control technology
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO ₂	Nitrogen dioxide
NO _x	Oxides of nitrogen
ORV	Off-road vehicle
PM10	Respirable particulates
PSD	Prevention of significant deterioration
RFD	Reasonably foreseeable development
RMP	Resource Management Plan
ROD	Record of Decision
ROW	Right of way
SARA	Superfund Amendments and Reauthorization Act of 1986
SITLA	State of Utah Institutional Trusts Land Administration
SO ₂	Sulfur dioxide
TPY	Tons per year
US	United States
USFWS	U.S. Fish & Wildlife Service
VER	Valid existing rights
VOC	Volatile organic compounds
VR	Visual range
WSA	Wilderness study area

1.0 PURPOSE OF AND NEED FOR PROPOSED ACTION

1.1 INTRODUCTION

Carbon Energy Corporation USA (Carbon Energy) plans to install, operate, and maintain a natural gas pipeline system in an area approximately 60 air miles south of Vernal, Utah, in the Wolf Point Gas Field. See Figure 1, General Location Map.

The Carbon Energy operation is identified as the Wolf Point Project and would consist of two distinct components:

- (1) A low-pressure pipeline gathering system connecting five existing gas wells to a compressor station; and,
- (2) A high-pressure pipeline from the compressor station to an existing gas transmission/sales pipeline, operated by Canyon Gas Resources.

Because portions of the Wolf Point Project would be located on public land administered by the Bureau of Land Management (BLM), the BLM is serving as the lead agency for the preparation of this environmental assessment (EA) in compliance with the National Environmental Policy Act (NEPA).

1.2 BACKGROUND

The five existing wells from which Carbon Energy plans to extract gas resources were drilled in the early 1980s. These wells are located on federal leases U-10173 (issued 12/1/69), U-6618 (issued 9/1/68), and U-30112 (issued 7/1/75).

Shortly after drilling, deflated gas prices precluded the installation of a regional gas transmission pipeline to bring these wells to market, so these wells were shut-in pending a return to acceptable economics. During their idle period, access was maintained into these wells, and they have been regularly tested to ensure their viability.

Over the past twenty years, ownership of the wells has been transferred or sold several times to other firms. Now under Carbon Energy ownership, Carbon Energy plans to install a gathering and pipeline system such that the firm, and its shareholders, can realize revenues from these long-idled well assets.

These five existing wells are located on BLM-administered federal land. Two of the wells (#5-13-15S-21E and #2-18-15S-22E) are located within the proposed Winter Ridge Wilderness Study Area (WSA).

Figure 1, General Location Map

In September 2001, Carbon Energy submitted a Plan of Development for the Wolf Point Project. The original alignment of the high-pressure gas pipeline was northward through Willow Creek Canyon to tie into a gas transmission/sales pipeline, operated by the Questar Gas Management Company (Questar). In September 2002, the BLM issued a draft EA addressing this proposed routing. Based on comments received on the September 2002 draft Wolf Point Project EA, Carbon Energy chose to re-route the high-pressure gas pipeline to parallel the existing county road along the Winter Ridge Divide, thus avoiding disturbance in Willow Creek Canyon.

1.3 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the Wolf Point Project is to provide an economically viable means to allow natural gas to be produced from Carbon Energy's existing shut-in gas wells and moved to an existing transmission/sales pipeline for transport to the consumer.

1.4 ISSUES AND CONCERNS

The following issues and concerns were outlined for the EA document:

- Air Quality – Address impacts to air quality in and around the proposed Wolf Point Project Area.
- Cultural Resources – Address the cultural resources of the proposed Wolf Point Project.
- Cumulative Affects – Address the cumulative impacts of the proposed Wolf Point Project.
- Land Use – Minimize disturbance by maintaining a compact operation.
- Recreation – Minimize disruption and disturbance to recreational opportunities.
- Soil and Watershed Resources – Outline how soils (growth medium) would be salvaged and used for reclamation. Identify the potential to disturb watershed resources within and surrounding the proposed Wolf Point Project.
- Vegetation – Address the affect of the proposed Wolf Point project on vegetation. Identify the potential to affect any threatened, endangered, candidate or sensitive plant species in the area.
- Wilderness – Discuss how the proposed Wolf Point project activities within the Winter Ridge Wilderness Study Area would not impair wilderness characteristics under the BLM Interim Management Policy for Lands Under Wilderness Review (IMP) and the Non-impairment Protective Standard in Section 603 of the Federal Land Policy and Management Act (FLPMA) to preserve the suitability of the Winter Ridge Wilderness Study Area for possible future Congressional Wilderness designation.
- Wildlife – Minimize disruption to wildlife. Identify the potential to affect any threatened, endangered, candidate or sensitive animal species in the area

1.5 CONFORMANCE BLM WITH LAND USE PLANS

BLM-administered federal public lands and resources in the Wolf Point Project area are governed by Book Cliffs Resource Area Resource Management Plan (RMP) and Record of Decision (ROD) (BLM 1985), and the Interim Management Policy for Lands Under Wilderness Review (IMP) (BLM 1995). The Wolf Point Project area is identified in the RMP and ROD as

generally open for oil and gas leasing and development, provided that specific stipulations and development restrictions related to the protection of wildlife resources in the area are adhered to during development activities (BLM 1985, pp 7-26).

Oil and gas leasing and development activities within the Winter Ridge WSA are governed by the IMP. The IMP provides specific management guidelines for proposed facilities and activities in WSAs in order to implement the non-impairment protective standard in Section 603 of the Federal Land Policy and Management Act (FLPMA) to preserve the suitability of WSAs for Congressional wilderness designation.

According to a recent consent agreement between the State of Utah and the Department of the Interior, the IMP is to be modified to no longer manage "post-603" areas (such as the "Wolf Point Addition" to the Winter Ridge WSA and other citizen generated "wilderness areas") that were proposed after 1993. However, WSAs that were included in the 1991 Report to the President, including the Winter Ridge WSA will continue to be managed according to applicable parts of the IMP.

The IMP recognizes valid existing rights (VERs), including oil and gas leases that existed prior to the enactment of FLPMA (BLM 1995, p.15). In addition, the IMP provides guidance on the implementation of development activities associated with mineral lease VERs within WSAs so as to preserve the wilderness suitability of WSAs to the maximum extent practical, while avoiding unreasonable interference with the exercise of the VERs.

1.6 RELATIONSHIP TO STATUTES, REGULATIONS, POLICIES AND CONSISTENCY WITH PLANS

The Wolf Point Project is located on public lands administered by the BLM, and the State of Utah, as well as on private lands. The BLM administered land in this area is generally open space used for oil and gas production, mineral exploration, livestock grazing, wildlife habitat, and recreation. The management of these lands within the Wolf Point Project area is directed and guided by the 1985 Book Cliffs Resource Area RMP and ROD (BLM 1985) and the Grand Resource Area RMP and ROD (BLM 1985b). Two of the Carbon Energy wells (#5-13-15S-22E and #2-18-15S-22E) and the two-track access roads to these wells are located in the Winter Ridge WSA.

The State of Utah trust lands within the Wolf Point Project area are managed by the Utah Institutional Trust Lands Administration (SITLA). These lands can be leased for oil and gas production by the SITLA. Because one of the objectives of SITLA is to produce funding for the state school system, oil and gas drilling and development are consistent with the objectives of this agency.

The Wolf Point Project is consistent with the General Plans of Uintah and Grand Counties. In the area of the Wolf Point Project, these plans support development proposals, multiple-use public land management practices, and responsible utilization of public land resources.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 ALTERNATIVE 1 - PROPOSED ACTION

2.1.1 General Description

Carbon Energy would install approximately 19 miles of pipeline, along existing two-track and county roads, to connect five existing natural gas wells to the existing Canyon Gas Resources gas transmission/sales pipeline.

The low-pressure pipeline gathering system would consist of four and six-inch diameter steel pipelines and would connect the five existing gas wells to a compressor station. The four-inch pipeline would be laid on the surface, but the six-inch pipeline would be buried parallel to the existing Bull Canyon and Winter Ridge Roads. This pipeline system would be located primarily on public lands administered by the BLM, while the compressor station would be installed on State Institutional Trust Lands Administration (SITLA) lands. This gathering system and compressor facility would be located within Uintah County. See Figure 2, Low-Pressure Pipeline Gathering System.

The high-pressure gas pipeline would be a ten-inch diameter buried steel pipeline and would cross federal, state and private surface lands in portions of both Uintah and Grand Counties. This pipeline would connect from the proposed compressor station to the existing Canyon Gas Resources transmission/sales pipeline and would parallel the Winter Ridge Road. See Figure 3, High-Pressure Pipeline Routing.

Surface ownership, pipeline dimensions, and projected pipeline lengths are show in Table 2-1, Right-of-Way Information.

Table 2-1 Right-of-Way Information				
Pipeline Length (miles)				
Ownership	4-inch Low-Pressure (surface laid)	6-inch Low-Pressure (buried)	10-inch High-Pressure (buried)	Total
BLM	4.2	5.5	3.1	12.8
State	0	0	5.4	5.4
Private	0	0	1.0	1.0
Total	4.2	5.5	9.5	19.2

Figure 2, Low-Pressure Pipeline Gathering System

Figure 3, High-Pressure Pipeline Routing

Carbon Energy is requesting a temporary 60-foot right-of-way for pipeline installation, which would revert to a permanent 50-foot right-of-way for operational activities. Within the Winter Ridge WSA, Carbon Energy is requesting a 30-foot right-of-way for both installation and operational activities.

A 637 horsepower compressor facility would be constructed on State of Utah administered lands in the NW 1/4, NW 1/4, Section 32, T15S, R22E. The compressor would boost the pressure of the gas gathered from the five existing wells to meet the line pressure required to deliver gas into the Canyon Gas Resources transmission/sales pipeline. The compressor would be equipped with a muffler or other noise reducing structure. A separator, dehydrator, gas conditioning facility, pig launcher, and tank battery would be installed at the compressor station. No man camp would be established at the compressor site.

Carbon Energy plans to begin construction activities for the proposed action in summer or early autumn of 2003, as weather conditions permit. Three temporary construction staging areas would be used: (1) at the compressor site, (2) at existing well site #6-14-15S-21E, and (3) at the Three Pines road junction. Construction activities should be completed within 60 to 90 days. Reclamation activities would be concurrent with construction and installation activities. Right-of-way re-seeding would be completed in the autumn of 2003.

The estimated disturbance associated with the pipeline and associated facilities is set forth in Table 2-2, Surface Area Disturbance (Proposed Action). Estimated disturbance by surface ownership is set forth in Table 2-3, Surface Area Disturbance by Ownership (Proposed Action).

2.1.2 Construction Procedures

2.1.2.1 Clearing Right-of-Way

No clearing or grading work would be necessary for the 4-inch low-pressure pipeline as it would be laid on the surface immediately adjacent to two-track well access roads.

Some clearing activities would be necessary along the rights-of-way for the 6-inch low-pressure and high-pressure pipelines. This clearing would consist of mostly sagebrush removal and the upper six inches of soil material which would be win-rowed for later use in reclamation activities. In addition, similar clearing actions would be required for the compressor station.

2.1.2.2 Traffic Control

During construction, traffic would be temporarily halted to allow the loading of pipe from flat bed trucks or the movement of heavy equipment across the roadway. Traffic would be delayed for durations of 5 to 10 minutes during these times.

Table 2-2 Surface Area Disturbance (Proposed Action)		
Facility¹	Area (acres)	Notes
4-inch low-pressure pipeline	0.2	4.2 miles long - laid on surface next to existing roads. 4.2 miles @ 0.33 ft = 0.17 acres. Assume 0.2 acres.
6-inch low pressure pipeline	20.0	5.5 miles long - buried adjacent to Bull Canyon and Winter Ridge Roads. 5.5 miles @ 30 ft disturbance width = 20.0 acres.
Compressor station	4.8	This site to be used for compressor and related facilities, including dehydrator, gas conditioning facility, pig launcher, and separator with oil and water tanks. This site also to be used for construction staging area.
10-inch high pressure pipeline	34.5	9.5 miles long - buried adjacent to Winter Ridge Road. 9.5 miles @ 30 ft disturbance width = 34.5 acres
Construction staging areas	1.0	One at Three Pines road junction in Section 17, T16S, R23E. Compressor station and existing well site # 6-14-15S-21E also to be used for construction staging (pipeline storage, equipment storage & parking, etc.) but no additional disturbance at these sites.
Total	60.50	
Notes: (1) For facility locations, see Figure 2, Low-Pressure Pipeline Gathering System, and Figure 3, high-Pressure Pipeline Routing.		

Table 2-3 Surface Area Disturbance by Ownership (Proposed Action)				
Facility	Ownership			Total Area (acres)
	Federal - BLM (acres)	State - SITLA (acres)	Private (acres)	
4-inch low-pressure pipeline	0.2	0	0	0.2
6-inch low-pressure pipeline	20.0	0	0	20.0
Compressor station	0	4.8	0	4.8
10-inch high-pressure pipeline	11.3	19.6	3.6	34.5
Construction staging areas	0	1.0	0	1.0
Total	31.5	25.4	3.6	60.5

2.1.2.3 Road Crossings

Crossing unsurfaced, rural roads and trails/access roads would be accomplished by trenching with a trackhoe. Pipelines crossing public roads would be buried to a depth of at least four feet. When crossing the two-track well access roads, the pipeline segment would be buried to a depth of at least 24 inches.

2.1.2.4 Construction Inside Wilderness Study Area

Well sites #5-13-15S-2E and #2-18-15S-22E are located in the Winter Ridge WSA. Construction activities within the WSA would include the following:

- (1) Gas-flow meter installation at the existing well heads;
- (2) Separator to remove liquids from gas stream;
- (3) Tanks to store separated liquids; and,
- (4) Steel surface pipeline installation from each well head to the junction with the main Winter Ridge Road (outside the WSA).

Installation of the gas-flow meters, separators, and tanks would take place entirely on the existing, previously-graded well pads. No new surface disturbance would be required, and no hazardous materials would be used or stored within the WSA for such installation activity.

Surface pipeline installation from each well would require laying out lengths of steel pipe, welding the lengths together, and rolling the pipeline into place. Lengths of pipe would be laid out on the existing, previously-graded well pad and access road for each well. The final pipeline route for each well would run immediately adjacent to the existing roadbeds. The new pipeline rights-of-way would be no more than 30 feet wide within the Winter Ridge WSA.

No cutting or removal of vegetation or other surface disturbance would occur within the Winter Ridge WSA. No clearing or grading would be required. No hazardous materials would be used or stored within the WSA for pipeline installation.

The gas recovery and surface pipeline facilities would be removed when the wells are plugged and abandoned or when Congress designates the area directly affected by the facilities as wilderness, whichever comes first.

2.1.3 Pipeline Operation and Maintenance

2.1.3.1 Safety

Carbon Energy intends to operate and manage the gas pipeline system in accordance with standard industry operational and maintenance procedures to ensure the safe operation and integrity of its facilities. Qualified operational personnel would operate the facility and perform routine inspection and maintenance. Operation of this gas pipeline system is not expected to necessitate an on-site presence; however, the site would be visited at least weekly by Carbon Energy personnel during operations to check for problems and ensure efficient operation. No operational or maintenance facilities would be required on site.

Carbon Energy also intends to design, construct, operate, and maintain their gas pipeline system in accordance with U.S. Department of Transportation minimal federal safety standards which are specified in 49 CFR Section 192, "Regulations for Transportation of Natural and Other Gas by Pipeline; Minimal Federal Safety Standards." In addition, the pipeline would be buried to

a depth of at least four feet along both Bull Canyon and Winter Ridge Roads. This burial depth is for long-term safety as the road departments from Uintah and Grand Counties are responsible for ongoing road maintenance and snow removal.

2.1.3.2 Chemicals and Hazardous Materials

Chemicals and hazardous materials would be managed in accordance with applicable federal, state, and local regulations. A listing of potential chemicals to be used during construction and operation is set forth in Table 2-4, Chemicals and Hazardous Materials. Carbon Energy and its contractors would transport, locate, handle, store, and use regulated hazardous materials in an appropriate manner that protects workers and the public, as well as preventing accidental releases to the environment.

2.1.3.3 Trash and Portable Toilets

Trash containers and portable toilets would be located on construction sites during pipeline installation. As necessary, toilet holding tanks would be pumped and their contents disposed of at Vernal's municipal sewage facility in accordance with applicable regulations. Accumulated trash and non-flammable waste materials would be hauled to the Uintah or Duchesne county landfills when necessary.

All debris and waste materials not contained in the trash containers would be cleaned up, removed from the right-of-way, and disposed of at the appropriate county landfill. Clean up activities would occur every day. No potentially harmful materials or substances would be left along the right-of-way or in the vicinity of the right-of-way. Scrap metal would be recycled as possible.

2.1.4 Reclamation

Following pipeline installation, broadcast seeding of a native plant seed mixture would be conducted along the right-of-way in areas determined by the BLM, SITLA, and the private landowners. Seeding would be conducted in late autumn of 2003.

Where the pipeline is buried on undisturbed ground (i.e., not a road crossing), plant growth material would be separated and stockpiled on site prior to pipeline installation. It is anticipated that the first 6 inches of material would be classified as plant growth material. Once the pipeline is buried, backfilling would be required and the excavated areas would be regraded to blend in with the surrounding topography. When backfilling is completed, the plant growth material would be spread over the backfilled areas and the area seeded as described above.

2.1.5 Final Abandonment and Decommissioning of Facilities

The final abandonment and decommissioning of the gas pipeline and related facilities would occur after economical gas reserves are extracted from the field. The exact timing of final decommissioning is not possible to establish at the current time. The timing of abandonment depends on gas prices, gas production rates, gas reserves, and other logistical and economic considerations.

Table 2-4 Chemicals and Hazardous Materials				
Materials Used	Use	Quantity¹	Hazardous Chemicals Contained²	Extremely Hazardous Substances Contained²
Gasoline	Fuel	50 gallons per vehicle: 10 vehicles yields a maximum total of 500 gallons	benzene cumene toluene ethylbenzene xyleneMethyl tertiary butyl ether (MTBE) polynuclear aromatic compounds	None
Diesel	Fuel	2,500 gallons in an oiler truck and 1,000 gallons in five pieces of heavy equipment for a total of 3,500 gallons	benzene cumene toluene ethylbenzene xylene polynuclear aromatic compounds naphthalene	None
Lubricating oil	Lubricant	100 gallons in five pieces of heavy equipment	zinc compounds copper compounds polynuclear aromatic compounds hydrocarbons	None
Hydraulic oil	Hydraulic fluid	100 gallons in five pieces of heavy equipment	zinc compounds copper compounds polynuclear aromatic compounds hydrocarbons	None
Notes (1) Maximum quantity on hand at any given time. (2) As defined under SARA Title III (The Emergency Planning & Community Right-to-Know Act; 40 CFR Part 335, 370, 372; as listed in the EPA's consolidated List of Chemicals Subject to Reporting under Sara Title III), and/or CERCLA (40 CFR Part 300), and/or DOT Hazardous Material regulations (49 CFR Parts 179-177).				

2.1.6 Applicant-Proposed Environmental Protection Measures

2.1.6.1 Cultural Resources

Carbon Energy and their contractors would inform their employees about relevant federal and state regulations intended to protect cultural resources. If any cultural resources are unearthed or otherwise encountered during the construction and installation activities on BLM, SITLA or private lands, construction activities would cease, and Carbon Energy would notify the BLM and the Utah Historic Preservation Office such that the cultural resources can be identified and appropriate resource protection measures developed and implemented.

2.1.6.2 Sediment and Erosion Control

No construction activities would occur when soils are too wet to support heavy equipment. Soils would be deemed too wet to support heavy equipment if wheel tracks create ruts deeper than 3 inches. Should this happen, construction would be delayed in that area until soil conditions improve. This practice would occur on federal, state and private lands.

2.1.6.3 Noxious and Invasive Weeds

To reduce the likelihood of the introduction of noxious and evasive weed species into the area, the following measures would be implemented:

- (1) Carbon Energy and their contractors would power-wash construction equipment and vehicles prior to the start of construction. Any construction equipment taken off-site, such as to another remote construction site, would be power-washed prior to being returned to the Wolf Point Project area.
- (2) Carbon Energy would implement a reclamation and weed control program within 90 days of project completion. Carbon Energy would seed areas determined necessary by the BLM, SITLA, and the private landowner, using a native plant species indigenous to the project area. Seeding applications would continue until determined successful by the BLM and SITLA, as well as the private landowner. Weed control, if necessary, would be conducted through an approved pesticide use and weed control plan required by the BLM, SITLA, or the private landowner.

2.1.6.4 Wildlife and Sensitive Animal Species

Carbon Energy would avoid any Wolf Point pipeline installation work within a half mile radius of active raptor nests (one mile for peregrine falcon) or within a half mile of a bald eagle winter roost area, unless an exemption is granted by the appropriate surface management agency (BLM or SITLA). See Table 2-5, Raptor Nest Protection Dates. Likewise, no new construction activities would be allowed for the period of March 1 through June 30 within a two mile radius buffer zone of sage grouse leks. In addition, because the portion of the proposed Wolf Point Project ten-inch high pressure pipeline between Three Pines and the proposed delivery terminal is located in designated crucial mule deer winter range, Carbon Energy would avoid construction activities in this habitat between November 15 and April 15.

2.2 ALTERNATIVE 2 - NO-ACTION ALTERNATIVE

Under the no-action alternative, the Wolf Point Pipeline Project would not be authorized, and the Carbon Energy natural gas gathering system would not be installed. The five existing shut-in wells, and access to these wells, would remain in their current, albeit unproductive state. Gas resources tapped by these existing wells would not be developed, and the economic benefits of the pipeline installation and the distribution of the gas resource to the public and industrial users would not be realized. Implementation of the no-action alternative would not cause a cancellation of the existing Carbon Energy oil and gas leases, nor would it be expected to alter present and expected trends in regional energy development. Current resource trends and land uses in the region would continue.

Table 2.5 Raptor Nest Protection Dates	
Raptor	Seasonal Buffer
Golden eagle	February 1 - July 15
Bald eagle	January 1 - August 15 (November 1 - March 15 for winter roost areas)
Peregrine falcon	February 1 - August 31
Great horned owl	February 1 - May 15
Ferruginous hawk	March 1 - July 15
Long-eared owl	March 15 - June 15
Red-tailed hawk, Swainson's hawk, harrier, prairie falcon, and osprey	April 1 - July 15
Burrowing owl	April 1 - August 15
Mexican spotted owl	March 1 - August 31
Goshawk	April 15 - August 20
Merline	April 15 - June 25
Short-eared owl	April 10 - June 15
Kestrel	May 1 - June 30
Cooper's Hawk	May 1 - August 15
Turkey vulture	May 15 - August 15
Sharp-shinned hawk	June 20 - August 15
Notes: (1) Seasonal buffers are for a one-half mile radius for all active raptor nests and bald eagle winter roost areas, except for the peregrine falcon where a one mile buffer radius is recommended. (2) These seasonal buffers have been established as a result of coordination and interaction between the Utah Division of Wildlife Resources and the U.S. Fish and Wildlife Service.	

2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

2.3.1 Willow Creek Canyon Routing

The original proposed routing for the Wolf Point Project high-pressure pipeline was northward from the existing five gas wells. This routing followed the Bull Canyon Road, then diverted along an existing two-lane road essentially parallel to Bull Canyon, before continuing northward along an existing road in Willow Creek Canyon.

This alternative was the proposed action, analyzed in detail in the September 2002 Wolf Point Pipeline Project draft EA (UT-080-2000-006). Commentors on the September 2002 draft EA suggested that the BLM and Carbon Energy re-examine the possibility of installing a southeast routing of the pipeline along the Winter Ridge Road. These commentors wanted to avoid routing a pipeline in the Willow Creek Canyon area. As a result of concerns expressed on the

September 2002 draft EA on wildlife, aquatic resources, riparian vegetation, land use and cultural resources, a re-assessment of engineering and economical feasibility by Carbon Energy, and discussions between the BLM and Carbon Energy, Carbon Energy revised its proposed action, and the Willow Creek Canyon routing was excluded from detailed evaluation in this new EA.

2.3.2 On-Lease Pipeline Routes in the Winter Ridge WSA

Well sites #2-18-15S-22E and #5-13-15S-2E are located on federal oil and gas lease UTU-30112 (Section 13, Township 15 South, Range 21 East, and Section 18, Township 15 South, Range 22 East). This lease is located within the Winter Ridge WSA.

Consideration was given to installing a pipeline across Lease UTU-30112 connecting well sites #5-13-15S-2E and #2-18-15S-22E on lease, and then continuing southward from #2-18-15S-22E off lease along the existing road to the Winter Ridge Road outside of the Winter Ridge WSA. The existing road right-of-way could be amended to allow pipeline installation. Because the road right-of-way constitutes a valid existing right to construct and maintain a road, and because roads are not allowed with WSA's, the road right-of-way could be considered to form a boundary of the WSA, providing an off-lease means by which a pipeline could access the well sites.

Because of Trail Canyon, which is situated between these two well sites, this alternative would require the pipeline to be contorted to cross a canyon of this depth and width. This would create a low spot in the pipeline where liquid condensate would collect and freeze during the cold winter months. Pipeline freezing would be a potential operational and safety problem during the winter months. To prevent condensate freezing at the bottom of Trail Canyon, a pig launcher facility would have to be constructed at one of the well sites with an associated pig catcher and tank battery facility constructed in the bottom of Trail Canyon. A road would be necessary to access the pig catcher and tank battery facility.

Although this alternative scenario is feasible, new disturbance in Trail Canyon that would result from connecting the two well sites would result in greater impacts to the wilderness characteristics of the Winter Ridge WSA than would the proposed action. Therefore, this alternative was eliminated from detailed analysis.

3.0 AFFECTED ENVIRONMENT

3.1 CRITICAL ELEMENTS OF THE HUMAN ENVIRONMENT

Table 3-1, Resources Considered but not Analyzed in Detail, presents those critical resources or elements of the human environment that are not expected to be encountered or affected by the Wolf Point Project, along with the rationale why they were considered but not analyzed in detail.

Table 3-1 Resources Considered But Not Analyzed in Detail	
Resources	Rationale
Paleontology	Underlying bedrock would not be disturbed except at sites of previous bedrock disturbance (such as road crossings). Therefore, fossil resources would not be affected.
Cultural Resources and Native American Religious Concerns	Based on completed pedestrian surveys and lack of interest shown in the project by the Ute Tribe, there are no known issues of concern associated with the proposed action.
Land Use Plans and Controls	The proposed action is consistent with existing land use plans and controls.
Hazardous/Solids Wastes	No chemicals subject to SARA Title III in amounts greater than 10,000 pounds would be used. No hazardous substances are defined in 40 CFR 355 and threshold planning quantities would be used. Trash containers and portable toilets would be located on construction sites during pipeline installation (see Section 2.1.6, Applicant Proposed Environmental Protection and Management Measures).
Prime/Unique Farmlands	None present.
Wild/Scenic Rivers	None present.
Wild Horses	The project area is located within the Winter Ridge Wild Horse Herd area, but no effects to wild horses are expected because the proposed construction and installation activities would not occur during foaling and because wild horses are generally tolerant of human activities.
Aquatic Resources	There are no perennial streams to be directly affected by the proposed action.
Areas of Critical Environmental Concern	None present.
Visual Resources Management	The proposed action would be consistent with VRM Class IV objectives (BLM 1986).
Rangeland Standards and Guidelines	The proposed action would be consistent with existing BLM rangeland standards and guidelines regarding watershed and water quality protection, habitat protection for threatened and endangered species, and protection of ecological processes.
Environmental Justice	No minority of economically disadvantaged communities or populations are present which could be affected by the alternatives.

3.2 CULTURAL RESOURCES

A Class I file search was conducted at the Utah State Historic Preservation Office and at the BLM's Vernal Field Office. Class III pedestrian surveys have been completed on a 100-foot wide corridor along the proposed pipeline routes by both Montgomery Archaeological Consultants (Montgomery 2001) and Metcalf Archaeological Consultants (Metcalf 2003). These survey studies are on file at the BLM Vernal Field Office.

Five cultural resources were discovered during the Metcalf 2003 survey work, including one previously unrecorded prehistoric site, one previously documented prehistoric site, and three prehistoric isolated finds. One site (identified as 42UN3235) is recommended for inclusion on the National Register of Historic Places (NRHP); however, the portion of 42UN3235 within the area of potential effect (APE) for Wolf Point Project pipeline does not contribute to the site's significance. Another prehistoric site within the proposed Wolf Point Project pipeline right-of-way (42GR2425), was previously recorded in 1991 by F.R. Hauck of Archeological-Environmental Research Corporation (Hauck 1991); however, the site is not recommended for inclusion on the NRHP. The other three miscellaneous prehistoric finds would not be eligible for the NRHP.

In addition to the archaeological survey work completed on the proposed pipeline corridor, the Ute tribe was contacted to solicit input regarding Native American religious concerns within the proposed project area. The Ute tribe has not voiced any concerns about this proposed project.

3.3 SOIL AND WATERSHED RESOURCES

The project area consists of upland plateaus and ridges dissected by steeply incised canyons. Annual precipitation within the project area ranges from 5 to 10 inches. The project area drains across gently sloping upland plateaus and ridge tops into the steep adjacent canyons. Surface drainage enters into Willow or Meadow Creeks via numerous tributaries.

Soils along the proposed pipeline right-of-way are mainly mapped as the Winteridge - Moonset association, 1 percent to 8 percent slopes (Natural Resources Conservation Service 2001). The soils are productive, given relative physical and chemical characteristics, and comparatively stable in an undisturbed state.

The Winteridge soil, which supports a vegetation community dominated by Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*) on a plateau land form, is deep and well drained with a moderate water holding capacity and medium runoff potential. The dominant soil texture is a loam throughout the profile with a low, coarse fragment content, low salt and sodium contents, and a moderately high calcium carbonate value. It is moderately susceptible to erosion.

The Moonset soil occurs over hills across the dominating plateau land form and supports a pinyon-juniper vegetation community. These shallow, well drained soils are characterized by channery to extremely channery loam textures, low salt, sodium, and calcium carbonate contents, and a very low available water holding capacity. Runoff is classed as very high while the susceptibility to erosion is moderate.

3.4 AIR QUALITY

3.4.1 Criteria Pollutants

The Wolf Point Project area is located in an attainment area that is federally designated as PSD (Prevention of Significant Deterioration) Class II, indicating that air quality in the region is acceptable based on EPA standards for the protection of human health.

Site-specific air quality monitoring data are not available for the project area; however, the background concentrations for the regulated criteria pollutants are consistent with a rural area having low levels of industrial development and are below the National Ambient Air Quality Standards (NAAQS). See Table 3-2, Ambient Background Air Quality in Uintah County.

There are no designated PSD Class I areas in the vicinity of the project area. The closest federal PSD Class I area to the Wolf Point Project is Arches National Park which is located more than 45 miles south of the project area. Dinosaur National Monument (DNM), located approximately 60 miles northeast of the project area, is designated as PSD Class II area in Utah. However, within the State of Colorado, DNM is afforded PSD Class I protection for sulfur dioxide (SO₂). This is a State of Colorado designation, and it only applies to the one pollutant.

Essentially, the State of Colorado designation means that the Colorado portion of DNM has the same air quality standards as a federal PSD Class II area with the exception of SO₂, a criteria pollutant for which the monument is afforded the equivalent of the more stringent PSD Class I increment protection.

Table 3-2 Ambient Background Air Quality in Uintah County¹				
Pollutant	Averaging Period(s)	Uintah County Background Concentration (µg/m³)	NAAQS (µg/m³)	PSD Class II Increments (µg/m³)
SO ₂	Annual	3	80	512
	24-hour	48	365	91
	3-hour	100	1,300	20
NO ₂	Annual	5	100	25 30
PM ₁₀	Annual	5	50	17
	24-hour	25	150	
CO	8-hour	2,000	10,000	None
CO	1-hour	2,000	40,000	None
Notes (1) Values obtained from Utah Department of Environmental Quality, Division of Air Quality, as set forth in the <i>Dominion Exploration and Production River Bend Unit Pipeline Draft Environmental Assessment (EA No. UT-808-2001-374)</i> .				

3.4.2 Visibility

Visibility conditions within the Uinta Basin are generally good. Visibility is usually characterized by two parameters; visual range (VR) and the light-extinction coefficient (b_{ext}). The visual range parameter represents the greatest distance that a large dark object can be seen, while the light extinction coefficient represents the attenuation of light per unit distance due to scattering and absorption by gases and particles in the atmosphere. Under typical conditions the visual range and b_{ext} parameters are inversely related to each other. That is, good visibility conditions are represented by long visual ranges and low b_{ext} values, while poor visibility conditions are represented by short visual ranges and high b_{ext} values. The dimensions of visual range are length, and the parameter is usually expressed in kilometers (km). The units of b_{ext} are 1/length (inverse length) and the coefficient is typically expressed as “inverse kilometers” (km^{-1}), or “inverse megameters” (Mm^{-1}) the reciprocal of 1 million meters. A standard visual range of 249 km (b_{ext} of 15.7) is reported for Arches National Park (FLAG 1999). This area is considered to have good visibility conditions.

3.4.3 Regional Winds

Transportation and dilution of air pollutants are a function of wind speed and direction. Winds dictate the direction in which the pollutants are transported. As wind speed increases, the dilution rate for the emitted pollutants also increases, thereby reducing pollutant concentrations.

The Wolf Point Project compressor/glycol dehydrator site is proposed for a location at nearly 7,500 feet elevation. This location means that pollutant dispersion would not be governed by localized wind flows determined by topography (such as can occur in a valley). Rather, wind flows will be synoptic (related to regional wind patterns).

Meteorological data including wind speed and direction are not available for the Wolf Point Project area. The nearest available surface meteorological data were recorded near Bonanza, Utah, at a site approximately 40 miles northeast from the project area. The wind data are tabulated in Table 3-3, Wind Direction Distribution, and Table 3-4, Wind Speed Distribution.

Table 3-3 Wind Direction Distribution ¹			
Wind Direction Origin	Frequency	Wind Direction Origin	Frequency
North	3.1 percent	South	3.0 percent
North Northeast	4.1 percent	South Southwest	3.5 percent
Northeast	10.6 percent	Southwest	6.9 percent
East Northeast	16.7 percent	West Southwest	8.1 percent
East	8.6 percent	West	7.7 percent
East Southeast	5.8 percent	West Northwest	5.6 percent
Southeast	5.5 percent	Northwest	3.5 percent
South Southeast	3.2 percent	North Northwest	2.2 percent
Notes			
(1) Wind data collected near Bonanza, Utah for years 1985, 1986, 1987, and 1992, as set forth in <i>Dominion Exploration and Production River Bend Unit Pipeline Draft Environmental Assessment (EA No. UT-080-2001-374)</i> .			

Table 3-4 Wind Speed Distribution ¹	
Wind Speed Category (miles per hour)	Frequency
Calm to 1.1	2.0 percent
1.1 to 4.0	29.7 percent
4.0 to 7.5	37.0 percent
7.5 to 12.1	21.3 percent
12.1 to 19.0	7.4 percent
19.0 to 24.7	1.9 percent
Greater than 24.7	0.7 percent
Notes (1) Wind data collected near Bonanza, Utah for years 1985, 1986, 1987, and 1992, as set forth in <i>Dominion Exploration and Production River Bend Unit Pipeline Draft Environmental Assessment</i> (EA No. UT-080-2001-374).	

3.5 VEGETATION

3.5.1 Vegetation Communities

The Sagebrush Community overlies the majority of the pipeline right-of-way and is supported by moderately deep to deep soils on nearly level to gently sloping uplands. The dominant species is Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*). Plant cover ranges from 45 percent to 65 percent.

The Pinyon-Juniper Community dominates the more gently rolling to steeply sloping washes and drainages, which are adjacent to the proposed pipeline right-of-way. Common to ridge side-slopes where soil depths range from very shallow to moderately deep, this community may also be found bordering rock outcrop formations and surface rock exposures. Percent plant cover, as well as species dominance, is highly variable ranging from 20 percent to over 40 percent. Dominant species include pinyon pine (*Pinus edulus*) and Utah juniper (*Juniperus osteosperma*). The understory can range from nearly bare to a productive mixture of grass, forb, and shrub species.

The five existing well sites support a variety of herbaceous and shrub species making up the Disturbed Herbaceous - Shrub Community. Percent plant cover ranges from 10 percent to over 50 percent with higher values indicative of deeper soils with a lower coarse fragment content. Species present include rubber rabbitbrush (*Chrysothamnus nauseosus*), Wyoming big sagebrush, and a phlox (*Phlox* sp.).

3.5.2 Threatened, Endangered and Sensitive Plant Species

Fourteen plant species are listed by the Vernal and Moab Field Offices as and potentially occurring in the area within and surrounding the Wolf Point Project. The habitat requirements and known elevational ranges of these species were evaluated and compared to the parent materials, soils, vegetation communities, and elevation range of the proposed right-of-way. As a result of this review, it was determined that no "threatened," "endangered," or "sensitive" plant species occur within or adjacent to the proposed Wolf Point Project area.

Twelve of these species were eliminated from consideration given that the required geologic formation, soils, and/or vegetation types are not present along the right-of-way. The right-of-way also occurs at higher elevations than the known ranges of several of the listed species. The other two other species were eliminated from consideration given that they are only known to

occur in Daggett County. See Table 3-5, Sensitive Plant Species Summary.

3.6 WILDLIFE

3.6.1 Habitat

Wildlife habitat in the Wolf Point Project area is predominantly comprised of Wyoming big sagebrush and pinyon-juniper stands. These habitats are utilized by a variety of big game, small mammals, birds, and reptiles.

Water resources and associated riparian zones are the most limiting habitats for area wildlife. Riparian vegetation provides beneficial cover, forage, open water for consumption, breeding areas, and brooding habitat. No riparian vegetation would be removed during pipeline and associated facility construction.

3.6.2 Big Game

Big game species occurring in the Wolf Point Project area include mule deer and elk. The area has yearlong habitat for these game species.

The most prominent big game species in the local area is mule deer. Part of the project area is considered crucial winter range. The winter period extends from November 15 through April 15. Mule deer migrations within the region typically occur on a south-north axis, with ridges providing optimal travel corridors (Karpowitz 1984). Mule deer migrations also occur along canyon bottoms. However, no formal migration corridors have been identified within the project area.

Elk occur yearlong in the area. They use low-elevation water sources such as Willow Creek during both the winter and summer seasons.

3.6.3 Upland Game Birds

Sage grouse are considered the most sensitive upland game bird for the proposed Wolf Point Project. Grouse also is categorized as a BLM species of concern and a state-sensitive species and is discussed further in Section 3.6.6, Threatened, Endangered, and Sensitive Wildlife Species.

3.6.4 Other Game Species

Mountain lion, black bear, and bobcat, which are categorized as game species in Utah, may occur in this area. These secretive animals maintain relatively large home ranges and would occupy such habitats as canyons, pinyon-juniper woodlands, and ephemeral drainages.

3.6.5 Non-Game Species, including Raptors and Migratory Birds

Non-game species encompass a large diversity of species and trophic levels. Some of the more common and visible species include raptors or birds of prey.

Areas of cliffs and rock outcrop within the region provide nesting sites for several raptor species including golden eagle, red-tailed hawk, prairie falcon, and turkey vulture. Known nest site

Table 3.5

locations within the area were obtained from the BLM. Sensitive raptor species potentially affected by the proposed project are addressed in Section 3.6.6, Threatened, Endangered, and Sensitive Wildlife Species.

Other important non-game bird species include a diversity of neotropical migrants (i.e., birds that breed in North America and winter in the neotropical region of South America). Many of these non-game bird species are associated with terrestrial upland habitats, which provide nesting and perching habitat. These birds are protected by the Migratory Bird Treaty Act.

Those migratory bird species that are classified as species of special concern or are federally listed as endangered, threatened or candidate species are addressed in Section 3.6.6, Threatened, Endangered, and Sensitive Wildlife Species. Those species identified as high-priority birds in the Colorado Plateau (which includes the Wolf Point project area) by the organization Partners In Flight are as follows by habitat type:

- Cold desert shrub (big sagebrush): Gunnison's Sage-Grouse, Greater Sage-Grouse, Bendire's Thrasher, Sage Sparrow;
- Riparian: Bell's Vireo;
- Mountain shrub (mixed shrub): Virginia's Warbler;
- Pinyon-juniper: Black-chinned Hummingbird, Gray Flycatcher, Cassin's Kingbird, Gray Vireo, Pinyon Jay, Juniper Titmouse;
- Coniferous woodland/forest: Spotted Owl; Lewis's Woodpecker; Grace's Warbler; and,
- Cliff/rock: White-throated Swift

3.6.7 Threatened, Endangered and Sensitive Wildlife Species

The U.S. Fish and Wildlife Service (USFWS) provided a listing of threatened, endangered, and candidate species for the Wolf Point Project. See Appendix 1, USFWS Letter. The BLM sensitive species list for Utah was also reviewed based on existing information related to known ranges and habitat preferences. A review of these species is set forth in Table 3-6, Threatened, Endangered, Candidate and Sensitive Wildlife Species Summary.

Based on this review, two federally threatened species, one state threatened wildlife species, and four wildlife species of concern were identified for further discussion as possibly being affected by project development. Other species listed in the USFWS letter (Appendix 1) were determined not to have the habitat to support their presence in the Wolf Point Project area.

3.6.6.1 Bald Eagle (Federal Threatened)

Bald eagles typically occupy habitats in coastal areas near lakes, reservoirs and rivers. Nests are usually used by the same pair for several years. No bald eagle nests or identified winter roost areas occur within the project area. Foraging habitat for the species does occur in this region, and the bald eagle could be expected in this area between November 1 and March 31.

Table 3-6 Threatened, Endangered, Candidate and Sensitive Wildlife Species Summary			
Species	Status	Habitat	Potential for Occurrence Along Right-of-way
Colorado Pikeminnow <i>Ptychocheilus lucius</i>	Federally Endangered	Endemic to Colorado River Basin. Habitat varies depending on life stage and season but includes shallow backwaters, eddies, pools, backwater areas, and deep runs. Critical habitat present in Vernal Field Office district.	None. No aquatic habitat present.
Humpback Chub <i>Gila cypha</i>	Federally Endangered	Endemic to Colorado River Basin, areas with deep, swift water and rocky substrates on the Green and Colorado rivers	None. No aquatic habitat present.
Razorback Sucker <i>Xyrauchen texanus</i>	Federally Endangered	Endemic to Colorado River Basin. Green River has only known spawning areas. Habitat varies depending on life stage but includes shallow water, backwaters, tributary mouths, pools, and runs. Critical habitat present in Vernal Field Office district.	None. No aquatic habitat present.
Bonytail <i>Gila elegans</i>	Federally Endangered	Endemic to Colorado River Basin	None. No aquatic habitat present.
Black-footed ferret <i>Mustela nigripes</i>	Federally Endangered	Occupies white-tailed prairie dog colonies in the Uinta Basin.	None. Occurrence at lower elevations.
Canada Lynx <i>Lynx Canadensis</i>	Federally Threatened	Higher elevations of Utah, include slopes of the Uinta Mountains, south to the Fish Lake National Forest	None. Appropriate habitat not found.
Bald Eagle <i>Haliaeetus leucocephalus</i>	Federally Threatened	Typically occupy coastal areas near lakes, reservoirs, and rivers.	No known nests or winter roost areas. May fly over project area. See Section 5.7.1.6
Mexican Spotted Owl <i>Strix occidentalis lucida</i>	Federally Threatened	Deeply incised canyon systems and wooded areas of isolated mountain ranges. Nests are typically on cliff faces in caves and crevices.	Habitat in canyon areas below right-of-way. Not expected to be impacted by project. See Section 5.7.1.6
Mountain Plover <i>Charadrius montanus</i>	Proposed Threatened	Nests in upland grass and shrub, frequently associated with prairie dog colonies	None. Occurrence at lower elevations.
Western Yellow-billed Cuckoo <i>Coccyzus americanus occidentalis</i>	Federal Candidate	Dense lowland riparian habitat, usually with willows.	None. Appropriate habitat not found.
Ferruginous Hawk <i>Buteo regalis</i>	State Threatened	Grasslands, shrub lands, and steppe deserts	Habitat present in area. Project not likely adversely impact this species. See Section 5.7.1.6
Roundtail Chub <i>Gila robusta</i>	State Threatened	Endemic to Colorado river Basin, runs and pools of streams	None. Aquatic habitat not present.
Northern River Otter <i>Lutra canadensis</i>	State Sensitive	Rivers and creeks in Utah	None. Aquatic habitat not present.
Ringtail <i>Bassariscus astutus</i>	State Sensitive	Rocky, boulder strewn riparian areas	None. Appropriate habitat not present.
Northern Flying Squirrel	State	Riparian zones and mature	None. Appropriate habitat

Table 3-6 Threatened, Endangered, Candidate and Sensitive Wildlife Species Summary			
Species	Status	Habitat	Potential for Occurrence Along Right-of-way
<i>Glaucomys sabrinus</i>	Sensitive	coniferous forests	not present.
Thirteen-lined Ground Squirrel <i>Spermophilus tridecemlineatus</i>	State Sensitive	Grasslands and open, semi-desert shrub land habitats with well-drained soils	Suitable habitat. Project not likely to adversely impact this species (See Section 5.7.1.6)
Olive-backed Pocket Mouse <i>Perognathus fasciatus</i>	State Sensitive	Open areas with sparse vegetation and sandy soils (extreme northeastern corner of Daggett County)	None. Occurrence in Daggett County.
Brazilian Free-Tailed Bat <i>Tadarida brasiliensis mexicana</i>	State Sensitive	Caves and mines in Utah, migratory spending summers in Utah and wintering in Southwest United States or Mexico	None. No caves or mines in the project area.
Townsend's Big Eared Bat <i>Plecotus townsendii</i>	State Sensitive	Occupies a variety of habitats, often found in forested areas	None. Appropriate habitat not present.
Osprey <i>Pandion haliaetus</i>	State Sensitive	Along rivers, lakes, and ocean coasts	None. Appropriate habitat not found.
Peregrine Falcon <i>Falco peregrinus</i>	State Sensitive	Nest in cliffs in association with riparian habitats	None. Appropriate habitat not found.
Northern Goshawk <i>Accipiter gentiles</i>	State Sensitive	Higher elevations in mature conifer forests and aspen stands and along valley cottonwood habitats	None. Appropriate habitat not found.
Swainson's Hawk <i>Buteo swainsoni</i>	State Sensitive	Nest in trees near open desert grasslands, shrub-steppes, and agricultural fields	Possible habitat. Project not likely to adversely impact this species (See Section 5.7.1.6)
Short eared owl <i>Asio flammeus</i>	State Sensitive	Open desert and semi-desert habitats, particularly near wetland vegetation	None. Occurrence at lower elevations.
Burrowing Owl <i>Athene cunicularia</i>	State Sensitive	Desert valleys and grassland communities, often associated with dens or burrows of prairie dog colonies.	None. Occurrence at lower elevations.
Three-toed Woodpecker <i>Picoides tridactylus</i>	State Sensitive	Mountain forest conifers, usually above 8000 ft.	None. Occurrence at higher elevations.
Lewis's Woodpecker <i>Melanerpes lewis</i>	State Sensitive	Riparian habitats of the Uinta Basin and along the Green River. Cavity nester in sycamore, ponderosa pine, and cottonwood.	None. Appropriate habitat not found.
Greater Sage Grouse <i>Centrocercus urophasianus</i>	State Sensitive	Sagebrush habitats	Habitat present. Project not likely to adversely impact this species. See Section 5.7.1.6
Long-billed Curlew <i>Numenius americanus</i>	State Sensitive	Upland meadows and rangelands	None. Appropriate habitat not present.
Bobolink <i>Dolichonyx oryzivorus</i>	State Sensitive	Flooded grasslands and wet meadows of Northern Utah	None. Appropriate habitat not present.
Common Yellowthroat <i>Geothlypis trichas</i>	State Sensitive	Riparian and wetland habitats, also in old fields and brushy pastures	None. Appropriate habitat not present.

Table 3-6 Threatened, Endangered, Candidate and Sensitive Wildlife Species Summary			
Species	Status	Habitat	Potential for Occurrence Along Right-of-way
Utah Milksnake <i>Lampropeltis tringulum taylori</i>	State Sensitive	Varied upland habitats ranging from pinyon-juniper woodlands, grasslands and canyons	Habitat present. Project not likely to adversely impact this species. See Section 5.7.1.6
Great Plains Rat Snake <i>Elaphe guttata</i>	State Sensitive	Woody areas, rocky hillsides, and meadowlands along water courses	Habitat present. Project not likely to adversely impact this species. See Section 5.7.1.6
Flannelmouth Sucker <i>Catostomus latipinnis</i>	State Sensitive	Endemic to the Colorado River Basin, rocky pools of slow-flowing, lower gradient reaches in larger rivers	None. No aquatic habitat present.
Colorado River Cutthroat Trout <i>Oncorhynchus clarki pleuriticus</i>	CS	Utah waters	None. No aquatic habitat present.

3.6.6.2 Mexican Spotted Owl (Federal Threatened)

The Mexican spotted owl inhabits canyon and montane forests, typically occurring in deeply incised canyon systems and wooded areas of isolated mountain ranges within the Colorado Plateau region. Most nests are located on cliff ledges or in caves of steep-walled canyons. The canyon areas below the proposed Wolf Point Project pipeline right-of-way along the Winter Ridge Road may contain potential habitat to be used by the Mexican spotted owl for nesting, foraging, dispersal and wintering; however, the pipeline routing does not occur in this habitat, and no critical habitat for this species been designated in the proposed project area.

3.6.6.3 Thirteen-lined Ground Squirrel (BLM Species of Concern)

This species inhabits grassland and open, semi-desert shrubland habitats with well-drained soils. Its distribution is restricted to the Uinta Basin in Utah. Open areas of sagebrush habitat south of Bull Canyon may represent suitable habitat for thirteen-lined ground squirrel, although this species usually prefers more open, grass-dominated habitats.

3.6.6.4 Ferruginous Hawk (State Threatened)

The ferruginous hawk inhabits grasslands, shrublands, and steppe-deserts of the Western United States. Foraging habitat consists of non-forested, non-mountainous areas such as desert shrub and grassland communities. Nesting habitat consists of low shrub or grassland communities with isolated trees, bluffs, buttes, rock outcrop, and open country with some rolling topographic relief. In Utah, this species nests at the edge of juniper habitat and in open desert and grassland habitats. In the Wolf Point Project area, the interface between pinyon-juniper stands and sagebrush habitat represent potential nesting and foraging habitat for ferruginous hawk.

3.6.6.5 Swainson's Hawk (BLM Species of Concern)

Swainson's hawks are known to nest in trees, shrubs, and occasionally on low cliffs, cutbanks, and on the ground (Terres 1980). In Utah, this hawk appears to prefer to nest in deciduous trees in open desert grasslands, shrub-steppes, and agricultural fields. The probability of this species nesting in the project area is low since Swainson's hawks typically

prefer more open grassland and agricultural habitats than those present within the project area.

3.6.6.6 Sage Grouse (BLM Species of Concern and State-Sensitive Species)

Sage grouse are categorized as a BLM species of concern and a state-sensitive species. Sagebrush is a key component of sage grouse habitat on a yearlong basis. Sagebrush provides forage and nesting, security, and thermal cover for sage grouse. Moist areas that support succulent herbaceous vegetation during the summer months are used extensively as brood rearing habitat. Open, often elevated areas within sagebrush habitats usually serve as breeding areas (strutting ground or lek). Areas of sagebrush in the project area south of Bull Canyon represents suitable habitat for sage grouse, and BLM records indicate that two sage grouse leks are located on BLM-administered land within 0.25 mile of one of the existing Wolf Point Project well pads.

3.6.6.7 Utah Milk Snake (BLM Species of Concern)

This species inhabits a variety of habitats including grasslands, woodlands, shrubby hillsides, and canyons. It is nocturnal and stays hidden during the daytime under rotting logs and debris as well as in burrows and other appropriate hiding sites. Suitable habitat exists for this species throughout the project area.

3.7 RECREATION

The project area, particularly the Book Cliffs area, offers open space where visitors can participate in primitive or unconfined recreation activities in an unrestricted setting. The remoteness of this region and the unimproved roads leading into the area represents mixed use recreational opportunities, from the potential of primitive back country camping and hunting, to sightseeing on established roads. Although the remoteness and unimproved roads in some ways limit recreational use, those wanting a primitive or unconfined recreational experience can be drawn to the area largely because of its remoteness. Generally, visitors to this area would stay more than one day because of the time necessary to make a round trip from even the nearest community, which is Vernal, Utah.

Existing recreational uses in the vicinity of the Wolf Point Project area include widely dispersed activity such as hunting, back-country driving for pleasure (including off-road vehicle travel), Christmas tree cutting, firewood and post cutting, site seeing, horseback riding, antler collecting and occasional camping and hiking. However, with the exception of hunting and the recent popularity of antler collecting for both deer and elk, there is relatively light use of the area because of its remoteness and long travel over weather dependent and sharp shale imbedded road surfaces. In winter, the area lacks sufficient snow to be desirable for snow-shoeing, cross-country skiing, or snowmobiling.

There are no developed recreational facilities, campsites, or trail systems operated by the BLM or other agencies within the immediate area of the Wolf Point Project, although some dispersed camping does occur in the vicinity. Much of this camping is likely related to hunting activity. Hunting generally occurs in the fall and winter months and is the predominate recreational activity in the project area. Most of the large game hunting is primarily for mule deer. Small game hunting does occur within the region.

Travel by off-road vehicles (ORV) generally is limited to existing roads. There is no established ORV trail system in this area. Much of the off-road vehicular traffic is conducted

in association with hunting activities, although there appears to be growing spring and summer usage of ATV's (all-terrain vehicles) in the area.

Recreational use of this area in the future is expected to increase for those that want a remote experience, largely because the Book Cliffs area is located approximately midway between the two large metropolitan areas of the Denver/Front Range and the Salt Lake City/Wasatch Front.

The current total recreation use for this area (10 mile radius) is estimated to be approximately 2,300 visitor days annually. These numbers are derived from big game hunting (1,200 visitor days), sightseeing by vehicle and by ATV's (600 visitor days), antler collecting (300 visitor days), and 200 visitor days for miscellaneous activities like Christmas tree cutting, camping, hiking and biking.

3.8 WILDERNESS RESOURCES

There are no designated wilderness areas within proximity of the Wolf Point Project; however, the Winter Ridge WSA is located within the project area. The history of the Winter Ridge WSA is set forth in Appendix 2, History of Winter Ridge WSA in Relationship to the Wolf Point Project.

The BLM has studied this Winter Ridge area and analyzed the effects on present or potential resource uses that would result from wilderness designation or non-designation. The results of this analysis are reported in the *Utah BLM Statewide Wilderness Final Environmental Impact Statement – Volume VI East Central Region, November 1990*. The Wilderness EIS was prepared in response to Section 603 of FLPMA, which directed BLM to complete a wilderness review of the public lands. The proposed action for the Winter Ridge WSA in the Final Wilderness EIS was the “no action/no wilderness alternative.”

Because of manageability issues addressed in the Utah Statewide Wilderness Study Report, dated October 1991, the Department of the Interior recommended to Congress that the Winter Ridge WSA not become a wilderness. However, that recommendation carried with it no change in management of the WSA. It remains a WSA and is managed as such until it is either designated wilderness or released from its WSA status by Congress.

The Winter Ridge WSA consists of 42,462 acres of public land in the Bookcliffs mountains in southern Uintah County, Utah. The WSA is about 60 miles south of Vernal, Utah. There are four sections of state land (2,561.4 acres) within the WSA. There are no private or split-estate lands.

Wilderness values are based on several criteria including size, naturalness, solitude, primitive and unconfined recreation opportunities, and special features. Although approximately 84 percent of the Winter Ridge WSA (35,835 acres) meets wilderness criteria for naturalness according to the Utah BLM Statewide Final Environmental Impact Statement (November 1990), naturalness has been lost in the remainder of the area due to dominant human imprints largely resulting from oil and gas development on the pre-FLPMA leases. The loss of naturalness is most evident in the Main Canyon area due to visibility of roads, gas wells and pipeline routes. Other areas where naturalness is lost is the location of the subject project well sites in the southwest corner of the WSA.

The WSA has outstanding opportunities for solitude. Although the inventory did not identify any outstanding opportunities for primitive and unconfined recreation, there are opportunities for day hiking, backpacking, horseback riding, and big game hunting. Although big game

hunting is popular within the region, the quality of the wildlife habitat within the unit is lower than the surrounding areas. The inventory identified wild horses as a special feature, and they do exist within the project area. Although not identified in the inventory, wildlife values could also be considered special features.

The two existing roads along which the low-pressure surface pipelines from existing well sites #5-13-15S-21E and #2-18-15S-22E would be laid to the Winter Ridge Road are located within the Winter Ridge WSA. Portions of the low- and high-pressure segments of the proposed pipeline would run adjacent to the WSA, separated from the WSA's western boundary by the existing Winter Ridge Road.

The naturalness values of the southeast part of the Winter Ridge WSA were known to be degraded when the area was designated as a WSA in 1983, due in part to these two developed natural gas wells and the access roads to them. One of the roads within the WSA, the one upon which the pipeline to well site #2-18-15S-22E would be located, is within an existing road right-of-way. Although these roads and wells were not excluded when the WSA was created, they probably should have been - particularly the road with a right-of-way because the right-of-way provides a valid existing right to construct and maintain a road. WSA's are roadless by definition, although roads often form the boundaries of WSA's.

4.0 REASONABLE FORESEEABLE DEVELOPMENT

4.1 INTRODUCTION

Federal regulations, 40 CFR 1508.7, define cumulative impacts as:

“...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

The proposed project incorporates measures intended to reduce, minimize, or avoid adverse effects on the human environment. These measures are summarized in Chapter 4.0, Environmental Consequences, for both the proposed action and the no-action alternative.

As summarized in Section 4.7, Unavoidable Adverse Impacts, implementation of the proposed action would be expected to have certain effects that would not be completely mitigated. In addition, other past, present, and foreseeable future projects may have residual effects as well, despite implementation of environmental protection and mitigation measures discussed in this document and other oil and gas environmental assessments. This chapter identifies cumulative impacts as the incremental effect to specific resource areas that would occur from implementation of the proposed action in conjunction with impacts from other past, ongoing, recently approved, and reasonably foreseeable future actions, and considers these impacts in the context of ecosystem management in Uintah and Duchesne counties.

While much of the following discussion focuses on cumulative adverse impacts of future oil and gas development, it should be noted that beneficial cumulative effects also would occur. Beneficial cumulative effects would include increased government royalties and revenues derived from oil and gas production, additional employment opportunities in the region, and decreased reliance upon foreign sources of energy as domestic supplies are developed.

4.2 REGIONAL ANALYSIS OF REASONABLE FORESEEABLE FUTURE DEVELOPMENT

This EA incorporates key projects for ongoing, proposed, and potential exploration and production actions within Duchesne, Grand, and Uintah counties, defined as the cumulative impact analysis area (CIAA). Reasonably foreseeable development (RFD) projections are based on current knowledge of energy prices, geology, drilling technology and reservoir management. In practice, however, this knowledge will change over time. For example, currently unknown geologic or reservoir conditions, changes in energy prices and other economic factors would cause far fewer wells to be drilled within the CIAA. It is also important to note that the RFD projections are made only for the purpose of projecting future cumulative impacts. RFD items are assumptions for analysis and are not part of the proposed project. Inclusion in the RFD scenario does not constitute a decision nor a commitment of resources.

If a future action requires NEPA compliance, inclusion in this cumulative impact scenario would not satisfy that requirement. Oil and gas development is one of a few major resource

development activities within the CIAA. Development commenced during the mid 1900s, and it is continuing at record or near record levels.

Table 4-1, Present and Historic Oil and Gas Well Status Summary for Duchesne and Uintah Counties, summarizes the number of wells and well status within Duchesne and Uintah counties.

Table 4-1 Present and Historic Oil and Gas Well Status Summary For Duchesne and Uintah Counties	
Well Status	Number of Wells
Drilling	200+
Producing Oil Wells	1610
Producing Gas Wells	1478
Shut-in Oil Wells	194
Shut-in Gas Wells	315
Service Wells (injection, disposal, water, etc.)	287
Temporarily Abandoned	380
Abandoned	474
Plugged and Abandoned	206
Total Wells	5134
Sources: USDI-BLM 1999 and Utah DOGM (2001)	

4.3 REASONABLY FORESEEABLE FUTURE DEVELOPMENT IN THE VICINITY OF WOLF POINT PROJECT PIPELINE

Table 4-2, Primary Screening Matrix – Reasonably Foreseeable Development Activity Analysis, presents an overview of past, present, and reasonably foreseeable development (RFD) activities within and surrounding the proposed Wolf Point Project.

4.3.1 Oil and Gas Development

Oil and gas activities (drilling, production, transport, etc.) are occurring in the vicinity of the proposed Wolf Point Project; however, the Winter Ridge WSA and the P.R. Spring Special Tar Sand Area present major obstacles to future oil and gas drilling in this area.

The Winter Ridge WSA is currently managed by BLM under H-8550-I, the Interim Management Policy (IMP) for Lands Under Wilderness Review (BLM 1995). Under the IMP, oil and gas development would be allowed within the Winter Ridge WSA only if a Valid Existing Right (VER) is being exercised. A VER is a right that existed within the boundary of the WSA on the date the FLPMA was enacted (October 21, 1976).

Only 25 percent of the Winter Ridge WSA has been leased according to the BLM 1980 Wilderness Inventory. Most of that leasing is on the eastern and northeastern part of the Winter Ridge WSA. There are some producing wells in this area, but they are tied to existing pipelines. Further development of this pre-FLPMA leased area would depend on 1) whether or not the leases qualify as VERs under the IMP, and 2) whether or not the language of the leases and lease stipulations allow for development within the practical constraints of trying to develop new facilities within a WSA. Depending on future market conditions and

Table 4-2, page 1

Table 4-2, page 2

Table 4-2, page 3

Table 4-2, page 4

technology, it is reasonable to expect that some VERs would be exercised and developed within the Winter Ridge WSA.

Expanded oil and gas development on post-FLPMA leases that are not VERs within the Winter Ridge WSA would not be allowed until Congress acts on the WSA and/or a final decision is reached by BLM on the status of a WSA. At present, it is highly speculative to try and guess what Congress might do and when (or if) the BLM might make a decision on the WSA issues in Utah. Given this situation, it is not “reasonably foreseeable” that any new oil and gas leasing or any actual oil and gas development on post-FLPMA leases would occur in the Winter Ridge WSA.

Similar to the designation of WSA, the BLM has also established or set-aside the P.R. Spring Special Tar Sand Area. Since its designation as “tar sand” reserve in the 1980s, there has been no oil and gas leasing from this reserve. Similar to a WSA, existing lease holders have VERs but in the immediate vicinity of the Wolf Point Project, there are no other existing oil and gas leases.

Like the WSA situation, it is highly speculative to predict when (or if) the BLM might decide to return to a policy of issuing conventional oil and gas leasing from this tar sand reserve. Therefore, for purposes of the Wolf Point EA, it is not “reasonably foreseeable” that any new oil and gas drilling activity would occur within the P.R. Spring Special Tar Sand Area in the vicinity of the Carbon Energy existing wells and the proposed Wolf Point Project pipeline.

Topographic constraints include the steep canyon carved by Willow Creek to the west and north, and the Book Cliffs divide to the south. It is highly unlikely that any well production west of Willow Creek Canyon would be tied into the Wolf Point Project pipeline given the expense and logistics of pipeline installation across such a chasm. Similarly, well production south of the Book Cliffs divide would face economical and logistical constraints for connection to the proposed Wolf Point Project.

There are approximately 2,500 acres of surface area between the Willow Creek Canyon and the P.R. Spring Special Tar Sand Area where future drilling activities might occur (although there is no current proposal on file with BLM for any such drilling or associated activity). In addition, there is approximately 10,616 acres within the Winter Ridge WSA that has pre-FLPMA oil and gas leases that may qualify as VERs and eventually be developed for oil and gas production. Thus, there is a total of 13,116 acres within the CIAA that could be developed for oil and gas production.

Historically, based on the Utah Division of Oil, Gas & Mining (DOGM) oil and gas drill hole database, there has been 111 oil and gas wells drilled in the roughly 216 square mile area around the proposed Wolf Point Project. This translates to approximately one well per 1,245 acres or approximately one well per two sections. The Utah DOGM data further reveals that 64 percent of these wells have been plugged or abandoned (P&A).

With the 13,116 acres identified as being potentially available for drilling assuming the geology and economics are favorable for such drilling, historic Utah DOGM data suggests that approximately 11 wells would be drilled (based on 1,245 acres/well). At the historic 64 percent P&A rate, there would be a good possibility that 7 of the wells would be P&A, leaving 4 producing gas wells in the 13,116-acre area.

Assuming the most optimistic geologic scenario possible, a good gas-producing field in this area might support wells spaced on 320-acre centers (Ed Foresman, BLM Minerals

Specialist, Vernal Field Office, Personal communication with Jon Holst and Alan Czarnowsky, April 9, 2002). Under this 320-acre spacing scenario the 13,116-acre area would support approximately 41 gas wells. Based on the geometry of the 13,116 acres and tying these wells to the proposed Wolf Point Pipeline, each well would probably require, on average, 1 mile of road and pipeline, for an estimated total of 41 new miles of linear access road and pipeline rights-of-way (assuming pipelines parallel access roads).

4.3.2 Agricultural Activities

Agricultural activities have historically been and continue to be a part of the local land use. Summer livestock grazing occurs on the BLM Winter Ridge Grazing Allotment within and surrounding the Wolf Point Project area. In addition, agricultural activities such as pasture land improvement for livestock have historically occurred and would continue to occur in the Willow Creek Canyon area.

4.3.3 Mining

Although there are tar sand and oil shale resources within and surrounding the Wolf Point Project, there has been no past or present activity to develop these resources. No reasonably foreseeable mining activity is anticipated.

4.3.4 Recreation

There are no developed recreational facilities operated by the BLM within or surrounding the Wolf Point Project area. None are planned for the future. Hunting and antler collecting are the primary dispersed recreation activities in the area, and are expected to continue into the future as the major recreation uses.

The remoteness and solitude of the area would be expected to attract visitors in the future, largely because the Book Cliffs area is located approximately midway between the large metropolitan areas of the Denver/Front Range and the Salt Lake City/Wasatch Front.

5.0 ENVIRONMENTAL CONSEQUENCES

5.1 INTRODUCTION

This chapter describes the environmental consequences to the area and resources, based on the alternatives described in Chapter 2.0, Alternatives. For ease of presentation and comparison, the analysis discussions are separated into individual resource areas. Although the anticipated environmental affects of alternatives were analyzed for each resource discipline, impact analyses are focused on those disciplines that relate to the issues and concerns identified in Section 1.4, Issues and Concerns. Some impacts are expressed in qualitative terms, others in quantitative terms.

5.2 CULTURAL RESOURCES

5.2.1 Proposed Action

Known cultural resource sites have been avoided. However, pipeline installation and associated construction activities may result in some undiscovered cultural resources inadvertently being damaged or moved to the extent that their context would be altered. The area has been subjected to cultural study (see Section 3.2, Cultural Resources) and none of the isolated finds along the right-of-way meet the eligibility criteria for the National Register of Historic Places.

5.2.2 No-action Alternative

Selection of the no-action alternative would result in no impacts to any cultural resources in the area; however, cultural resources would continue to be exposed to natural geomorphic processes, foot and vehicular traffic associated with recreational use, and from livestock grazing.

5.3 SOIL AND WATERSHED RESOURCES

5.3.1 Proposed Action

Some disturbance to soil resources would occur where burial of the pipeline is proposed. Such disturbances would impact soils typically characterized by medium runoff potentials, nearly level slopes, and moderate erosion susceptibility.

Where excavations occur, approximately six inches of "topsoil" material would be salvaged and respread over the regraded disturbance. The disturbance would then be reseeded. The overall productive nature of the endemic soils and the narrow, linear nature of this type of disturbance suggest good revegetation potential and low susceptibility to erosive forces, particularly when considering the well-developed vegetation adjacent to the majority of the proposed right-of-way.

Some area would be impacted by the construction of facilities at the compressor site and the use of sites for construction staging. These areas would be subject to erosion over those portions of the disturbed portions of the site not covered with construction equipment, and soil compaction would also occur to a limited degree. Following construction, these disturbances would be reclaimed. Assuming the application of appropriate revegetation techniques, no detrimental impacts to soils are anticipated.

5.3.2 No-Action Alternative

Under the no-action alternative, the soil and watershed resources at the site would not be affected by installation of the proposed pipeline. Existing land use trends in the area would be expected to continue, however, including increased oil and gas development, increased ORV traffic, and increased recreational use for hunting and other dispersed recreation. These activities would cause a slow incremental increase in erosion rates in the area and incrementally degrade soil fertility and productivity over time.

5.4 AIR QUALITY

5.4.1 Proposed Action

Under the proposed action, emission sources would include a single compressor facility, pigging operations, and increased vehicle traffic during the construction phase of the pipeline. Air pollutant emissions from these sources would include fugitive dust, oxides of nitrogen (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), benzene, toluene, ethylbenzene, and xylenes (collectively called BTEX) and formaldehyde.

5.4.1.1 Vehicle and Fugitive Dust Emissions

During pipeline construction, vehicle and fugitive dust emissions would increase within the project area. Vehicle emissions would result from work crews commuting to and from the work site and from the transportation and operation of construction equipment. Vehicle tailpipes would emit small quantities of NO_x and CO. Fugitive dust concentrations would increase with additional vehicle traffic on unpaved roads and from wind erosion in areas of soil disturbance. These emissions would be in addition to the vehicle emissions currently generated from existing operations within the project area. However, because of the limited scope (restricted to locations where construction is actively taking place), and the short-term nature of these emissions, any increases in vehicle tailpipe or fugitive dust emissions would be minimal. Vehicle emissions and fugitive dust are not predicted to have adverse effects on air quality within the project area.

5.4.1.2 Criteria Pollutant Emissions

A single natural gas compressor and a dehydrator would be constructed and operated on State of Utah administered lands in the NW 1/4, NW 1/4, Section 32, T15S, R22E. The proposed compressor would be rated at 637 horsepower (hp). The compressor represents the primary source of NO_x and CO emissions at 12.3 and 11.7 tons per year (TPY), respectively. The compressor would also emit lesser amounts of volatile organic compounds (VOCs) and particulate matter (PM₁₀). NO_x and CO emissions from the compressor were evaluated using the EPA SCREEN3 model (EME Solutions 2002). Modeled maximum pollutant concentrations were combined with Uintah County background concentrations for comparison with the National Ambient Air Quality Standards (NAAQS). See Table 5-1, Comparison of Proposed Action Compressor to NAAQS. No violation of applicable state or federal air quality standards would occur as a result of these air emissions (including construction and operation). The sources of emissions are discussed individually below.

5.4.1.3 Hazardous Air Pollutant Emissions

Hazardous Air Pollutants (HAPS) can be subject to "Maximum Available Control Technology" (MACT) if they qualify as major or area sources. Major sources are defined as those sources

having the potential to emit 10 TPY of any individual HAP or 25 TPY of any combination of HAPs. Area sources include specific categories of operations that pose a threat to public health or the environment (e.g., asbestos processing operations, chromic acid anodizing operations, select commercial dry cleaning machines, etc.). Low levels of formaldehyde, a listed HAP, would be emitted from the compressor engine. However, the formaldehyde emissions do not qualify as a major or an area source, and therefore, are not subject to MACT standards. Formaldehyde emissions from the compressor engine are not predicted to have any adverse effects on regional air quality.

A glycol dehydrator is used to remove water from natural gas streams to prevent the formation of hydrates and corrosion in pipelines. This unit would be placed at the compressor station site.

Table 5-1 Comparison of Proposed Action Compressor to NAAQS					
Pollutant and Averaging Time	Modeled Compressor Maximum Impact¹ (µg/m³)	Uintah County Background Concentration (µg/m³)	Compressor Impact Plus Background (µg/m³)	NAAQS³ (µg/m³)	Percentage of NAAQS (%)
NO _x Annual ⁴	22.4	5	27.4	100	27
CO 1-hour	265.3	2,000	2,265.3	40,000	6
CO 8-hour	185.7	2,000	2,185.7	10,000	22
Notes (1) Maximum concentration was assumed to occur at 100 meters from the source (EME Solutions 2002). (2) Source of background concentrations: Utah Department of Environmental Quality, Division of Air Quality. Also see Table 3-1, Ambient Background Air Quality in Uintah County, in this EA document. (3) Source for National Ambient Air Quality Standards (NAAQS): Environmental Protection Agency, Office of Air Quality Planning and Standards. Internet site: http://www.epa.gov/airs/criteria . December 19, 2001. (4) The SCREEN3 model work was conservative, resulting in predicted concentrations that are higher than would actually occur. NO _x concentrations have been assumed to cover 100% to NO ₂ .					

Hydrocarbon emissions from the glycol dehydrator were estimated using the model GRI-GLYCalc 4.0 (EME Solutions 2002). Total hydrocarbon emissions from the glycol dehydrator are estimated at 1.04 TPY; total VOC emissions at 0.95 TPY; and "Other Hexanes" emissions at 0.78 TPY. HAP emissions are a subset of "Other Hexanes;" therefore, HAP emissions from the glycol dehydrator would be less than 0.78 TPY, and they would not be subject to MACT.

There are no NAAQS for VOCs; however, in ozone attainment areas in Utah, a source is considered minor if VOC emissions from the compressor and glycol dehydrator are well below this level, at approximately 3 percent of this threshold value.

5.4.1.4 Visibility Impacts

Visibility impacts were recently assessed for a neighboring project, Dominion's River Bend Unit Pipeline (*Dominion Exploration & Production River Bend Unit Pipeline Draft Environmental Assessment, Uintah County, Utah, October 2001*). For the Dominion analysis, visibility impacts at Dinosaur National Monument and Arches National Park were analyzed for seven proposed compressor engines totaling 6,959 hp and 134.4 tons per year NO_x emissions. The predicted maximum visibility impacts at Arches National Park and Dinosaur

National Monument did not exceed the significance thresholds of 5 percent b_{ext} and 0.5 dv. As this proposed action is much smaller in scope than the Dominion project (637 hp and 22.4 TPY NO_x emissions), no visibility impacts are anticipated as a result of the Wolf Point Project.

5.4.2 No-Action Alternative

Under the no-action alternative, the proposed pipeline, compressor station and glycol dehydrator unit would not be constructed, and no incremental increases in fugitive dust, criteria pollutants, or hazardous air pollutant concentrations would occur from the proposed project. Air quality within the project boundaries and surrounding area would remain under the influence of existing cumulative sources and land use trends. Current land use trends in the area would continue, including increased oil and gas development, increased ORV traffic, and increased recreational use for hunting and other dispersed recreation. Documented emissions sources are shown in Table 5-2, Existing Emission Sources. Increased emissions from increasingly intense land uses would cause an incremental degradation of air quality in the region over time, although this increase may not be measurable until the density of development increases significantly.

Table 5-2 Existing Emission Sources							
Distance From Site (miles)	Owner Name	Facility Name	CO (tons/yr)	NO_x (tons/yr)	PM_{10} (tons/yr)	SO_x (tons/yr)	VOC (tons/yr)
20 to 30	Canyon Gas Resources Inc.	Westwater Compressor Station	198.4	42.2	0.1	0.01	8.6
20 to 30	Canyon Gas Resources Inc.	San Arroyo Plant	39.8	394.1	1.9	0.03	36.0
20 to 30	Mid-America Pipeline Company	Dragon Station	43.9	28.2	3.1	0.14	5.1
Total Emissions			282.1	464.5	5.1	0.18	49.6

5.5 VEGETATION

5.5.1 Proposed Action

Construction activities would mainly affect the big sagebrush vegetation community, but some pinyon-juniper and mixed shrub vegetation communities would also be disturbed. Burial of the low pressure pipeline and construction for the compressor site would affect the big sagebrush vegetation community. Installation of the high pressure pipeline would affect big sagebrush and pinyon-juniper vegetation communities along the approximate western two-thirds of the proposed right-of-way, while mixed shrub habitats would be affected on the eastern one-third of the proposed line, generally east of the Three Pines junction in Section 17, Township 16 South, Range 23 East. A majority of the pinyon-juniper vegetation (approximately 70%) along the proposed high pressure pipeline routing has been modified by

cutting and removal of most pinyon-juniper trees within an approximate 100-foot corridor along the pipeline side of the Winter Ridge Road.

Carbon Energy has committed to revegetation to stabilize and reclaim the compression station area and the right of way affected by pipeline installation. Reclamation is also planned following project decommissioning. Given the limited disturbances, the inherent quality of the soil as shown by the natural vegetation, and the planned revegetation efforts, no long-term impacts would occur, and grass and shrub communities would be re-established to pre-installation vegetation levels within 3 to 5 years.

Because no threatened, endangered or sensitive plants occur in or adjacent to the proposed project area, there would be no impacts to threatened, endangered or sensitive plant species as a result of the proposed action.

5.5.2 No-Action Alternative

Under the no-action alternative, vegetation communities would not be disturbed by construction activities associated with the proposed action. There would be a general trend toward improvement in community composition and production on undisturbed sites; this improvement is tied to lower than normal grazing pressure on the Winter Ridge Grazing Allotment. Current land use trends in the area would continue, including increased oil and gas development, increased ORV traffic, and increased recreational use for hunting and other dispersed recreation. There could also be a continued removal of pinyon-juniper vegetation along road rights-of-way, such as the Winter Ridge Road, to serve as fire breaks. These land use trends would cause incremental increased disturbance and an overall loss of productivity to vegetation communities in the area.

5.6 WILDLIFE

5.6.1 Proposed Action

5.6.1.1 Habitat

Of the 60.5 acres of vegetation to be disturbed by pipeline installation and associated construction activities, approximately 44.5 acres would be sagebrush vegetation, 9.8 acres mixed shrub vegetation, and 6.2 pinyon-juniper vegetation. Of the 6.2 acres of pinyon-juniper vegetation estimated to be affected by installation of the proposed high pressure pipeline along the Winter Ridge Road, approximately 4.3 acres of pinyon-juniper trees have been previously removed, leaving less than 2 acres of pinyon-juniper tree vegetation in the proposed pipeline right-of-way along the Winter Ridge Road where trees would need to be removed for pipeline installation. Disturbed habitats would be anticipated to recover to a productive state for grasses and shrubs over a 3 to 5 year period after reclamation.

5.6.1.2 Big Game

Construction activities would displace mule deer and elk along the right-of-way during daylight hours during the proposed 2 to 3 month construction period. This displacement would be due to noise and human presence. Animals could move back into the area during twilight and nocturnal periods, when construction workers would vacate the area until the next working day. Although construction-related traffic would increase on Seep Ridge, Bull Canyon and Winter Ridge roads for 2 to 3 months, wildlife mortalities would be expected to be low (1 to 5 animals), because of the condition of the roads. Drivers would be instructed to

reduce speeds to avoid wildlife collisions.

No new primary access roads would be constructed that could adversely impact the movement of animals with large home ranges (e.g., mammalian predators) and big game animals that migrate seasonally (e.g., mule deer). Because noise and human presence would cease upon the completion of construction, prior to November 15th, there would be no anticipated long-term (post-construction) effects to wintering big game animals.

5.6.1.3 Upland Game Birds

Sage grouse is a BLM species of concern, and it is discussed below under the heading entitled "Threatened, Endangered, Candidate, and BLM Species of Concern."

5.6.1.4 Other Game Species

Mountain lion and black bear are typically wide-ranging and shy, avoiding areas with human activity. Construction activities would cause these animals to detour around the site of activity, but this effect would be short-term and temporary. Following construction, they would move back into the area.

Bobcat are secretive and mainly nocturnal. Like the mountain lion, they would avoid construction, but they may move through the construction areas at night because work would only be conducted during daylight hours.

5.6.1.5 Non-Game Species, Including Raptors and Migratory Birds

There would be little or no measurable effects on passerines and neotropical migrants. Since construction is scheduled to occur in the late summer or fall, no direct effects to nesting passerines or neotropical migrants is anticipated. In addition, due to the quantity of contiguous passerine and neotropical migrant habitats adjacent to the project area that have similar characteristics to those habitats that would be disturbed, there would be relatively minor direct habitat reductions for these species in the vicinity of the project area. There would, however, be fragmentation of the habitats due to the linear characteristics of disturbance areas that has not been quantified for this analysis. The level of fragmentation that would occur in the area due to the proposed action is not anticipated to have measurable effects on passerines and neotropical migrants.

To prevent impacts on raptor breeding activity, Carbon Energy has committed to avoiding construction activity that might affect occupied raptor nests and winter roosting areas for bald eagles. See Section 2.1.6.4, Wildlife and Sensitive Animal Species. With the implementation of this applicant-proposed environmental protection measure, there would be no anticipated adverse effects on nesting raptors in the project area.

5.6.1.7 Threatened, Endangered, Candidate, and BLM Species of Concern

Bald Eagle (Federal Threatened): No bald eagle nests or identified winter roost areas occur within the Wolf Point project area. Foraging habitat for the species does occur in this region, and the bald eagle could be expected to be seen in this area between November 1 and March 31, but the proposed time frame for the installation and construction activities of the Wolf Point project would not cause an impact to the nesting and winter roosting times of this species.

Mexican Spotted Owl (Federal Threatened): The canyon areas below the proposed Wolf Point Project pipeline right-of-way along the Winter Ridge Road may contain potential habitat to be used by the Mexican spotted owl for nesting, foraging, dispersal and wintering; however, the pipeline routing does not occur in this habitat, and no critical habitat for this species been designated in the proposed project area. In addition, the time frame proposed for pipeline installation and related construction would not interfere with the March 1 through August 31 mating and nesting period of the Mexican Spotted Owl.

Thirteen-lined Ground Squirrel (BLM Species of Concern). Suitable habitat may exist for this species along the pipeline rights-of-way in sagebrush habitat south of Bull Canyon. Construction disturbance in this area could result in the collapse of some burrows and mortality of thirteen-lined ground squirrels if they are present in the project area. However, this species is highly mobile, and most squirrels would be able to avoid construction activities.

Ferruginous Hawk (State Threatened): Nesting habitat may exist for this species at the interface between pinyon-juniper stands and sagebrush habitat within and surrounding the proposed Wolf Point project, but no impacts to this species are expected as a result of pipeline installation and related construction activities. There are no known nests for this species within or surrounding the proposed pipeline right-of-way areas, and the time frame proposed for pipeline installation and related construction would not interfere with the March 1 through July 15 mating and nesting period of the Ferruginous Hawk.

Swainson's Hawk (BLM Species of Concern): The probability of this species nesting in the project area is low since Swainson's hawks typically prefer more open grassland and agricultural habitats than those present within the project area; therefore, no impacts to this species are expected as a result of pipeline installation and related construction activities. There are no known nests for this species within or surrounding the proposed pipeline right-of-way areas, and the time frame proposed for pipeline installation and related construction would not interfere with the April 1 through July 15 mating and nesting period of the Swainson's Hawk.

Sage Grouse (BLM Species of Concern). Two known sage grouse leks are located near the proposed pipeline. Other leks may also be present within the sagebrush habitat of the area. To prevent impacts to sage grouse breeding and brood rearing activity, no pipeline or facilities construction is planned between March 1 and June 30.

Utah Milk Snake (BLM Species of Concern). Construction disturbance in areas of suitable habitat within the project area would occur primarily as a result of laying pipeline along the ground surface with minimal habitat disturbance beyond crushing of vegetation. This activity could result in the collapse of some burrows or crushing of debris piles and subsequent mortality of individual Utah Milk snakes if they are present in the project area.

5.6.2 No-Action Alternative

Under the no-action alternative, there would be no direct disturbance or indirect effects to wildlife and wildlife habitat from pipeline construction activities. Current land use trends in the area would continue, including increased oil and gas development, increased ORV traffic, and increased recreational use for hunting and other dispersed recreation. These land use trends would have ongoing unquantified effects on wildlife populations and habitat. Deer and elk populations are expected to remain stable into the near future. Sage grouse populations statewide are in decline - there is no documented evidence as to the reasons but in the opinion of BLM the drought conditions of the past decade are a contributing factor. There are

no established trends for other wildlife species in the area; however, ferruginous hawk populations in the region may be on the decline due to a variety of factors (low prey availability, drought, and increased human presence).

5.7 RECREATION

5.7.1 Proposed Action

Recreation impacts were based on projected short-term and long-term impacts on recreation resources, recreational opportunities and experiences as related to project construction and operations. Short-term (2 to 3 months) recreation impacts would occur during project construction.

Recreational users would be subject to the presence of equipment and equipment crews during the construction period, which may temporarily affect a user's primitive recreational experience if recreating within proximity of the construction activity.

Construction of the proposed pipeline would have no impacts on developed recreation facilities nor on any area available for dispersed recreation. The visual impacts associated with the visible pipeline corridor and the well activity may affect the aesthetic quality of the recreational experience for some recreationists. However, due to the relatively small number of visitors to the area and the limited affected environment (19.2 miles of pipeline and 60.5 acres of surface disturbance), the impacts would be considered minimal. Areas of high visual sensitivity have not been noted and the pipeline right-of-way would blend into the natural surroundings once revegetation is successful (3-5 years).

The short-term construction workforce of 25 to 30 people would not affect the demand on recreational resources in the region due to the short duration of the construction period.

Following installation of the pipeline construction and reclamation activities, the recreational experience would return to essentially its pre-disturbance state. Public access would be maintained into the site, but recreational users would view the pipeline right-of-way disturbance along portions of the Winter Ridge and Bull Canyon public roads. The actual impact would be based on the perspective of the particular individual or social group who might be recreating in the area. Possible aesthetic impacts may occur to individual users, however, most of the visible pipeline impacts would occur along already developed roadways and would therefore have minimal effect beyond that already experienced from the developed road impact.

Routine pipeline operation and maintenance would have little effect on recreational resources or opportunities since maintenance activities would occur relatively infrequently and would primarily be adjacent to the existing, county-maintained roadways.

5.7.2 No-Action Alternative

Under the no-action alternative, recreational activity in the area (hunting, ORV use, hiking, sight-seeing, etc.) would remain similar to existing conditions, but overall use of the area for dispersed primitive recreational opportunities would be expected to increase to account for continued population growth and economic prosperity in the greater metropolitan areas of Denver and Salt Lake City, especially for those individuals seeking remote areas and solitude. Current land use trends in the area would continue, including increased oil and gas development and increased ORV traffic. Over the next twenty years increased activity,

especially an increase in ORV use would degrade the remote recreation opportunities and solitude sought by certain visitors. Increased oil and gas exploration in the area is anticipated. This increased activity also would incrementally degrade remote recreation opportunities.

5.8 WILDERNESS RESOURCES

5.8.1 Proposed Action

Under the proposed action, new gas flow meters and surface low-pressure pipelines would be constructed within the Winter Ridge WSA. Construction for the gas-flow meters would take place entirely on the existing, previously graded well pads. Surface pipeline installation from each well would require laying out lengths of steel pipe along an existing access road, welding the lengths of pipe together, and rolling the pipeline into place adjacent to the roadway.

Since the lengths of pipe would be welded on the road and rolled into place along the existing access roads, no new clearing, scalping or removal of vegetation would be required, and no new surface disturbance is anticipated. There would be a minor trampling of vegetation when the pipelines are rolled into place, but the footprint of the pipeline would be kept to the minimum possible by keeping the pipeline routes immediately adjacent to the existing access roads. No hazardous materials would be used or stored within the Winter Ridge WSA for installation or operation of the gas meters or pipelines.

The naturalness values of the southeast part of the Winter Ridge WSA were known to be degraded when the area was designated as a WSA due to the two developed natural gas wells and the access roads to them (BLM 1984). The addition of surface pipelines and gas meters to the two Carbon Energy gas wells in the Winter Ridge WSA would also intrude on the naturalness of the area; but, because the pipelines would be placed within the disturbed area adjacent to the existing well access roads, the additional effect to naturalness would be minimal.

Pipeline and gas meter installation activities would degrade the solitude and opportunities for primitive recreation of the Winter Ridge WSA during the period of construction (2 to 3 months); but, following installation, the quality of solitude and opportunities for primitive recreation within the project area would be largely restored. Other wilderness values of primitive and unconfined recreation opportunities, and special features, and diversity would not be further degraded by pipeline construction and operation.

Because within the Winter Ridge WSA there would be no new surface disturbance and the pipelines would be temporary in that they would be laid on the surface and could be easily removed if the directly affected area is designated as wilderness, the proposed action would meet the non-impairment standard of the IMP. Although there would be minimal additional impact to wilderness values a new discretionary use would be introduced that could additionally constrain Congress from designating the area as wilderness. However, because roads have already been located here, wilderness impairment has already occurred. Should Congress designate the Winter Ridge WSA as wilderness, the existing roads and wells would probably be cherry-stemmed from the area even if this action is not approved.

5.8.2 No-Action Alternative

Under the no-action alternative, there would be no additional short or long-term degradation

of the wilderness characteristics of the project area or WSA from this proposed pipeline because although the proponent's gas wells would remain within the Winter Ridge WSA, and the proponent would continue to have full access to them, a new right-of-way would not be issued and the proposed gas gathering pipeline system would not be constructed. Because roads have already been located here, wilderness impairment has already occurred. Should Congress designate the Winter Ridge WSA as wilderness, the existing roads and wells would probably be cherry-stemmed from the area even if this action is not approved.

5.9 UNAVOIDABLE ADVERSE IMPACTS

There are unavoidable impacts that would occur as a result of the proposed action. These impacts are summarized in Table 5-3, Summary of Impacts by Alternative, and compared to ongoing impacts that would occur as a result of the no-action alternative.

5.10 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible resource commitments are those that cannot be reversed (loss of future options). It relates primarily to non-renewable resources, such as use of non-renewable energy resource (diesel fuel and gasoline) and effects to topography and cultural resources. The removal of natural gas from the five existing wells would be an irreversible impact caused by the Wolf Point project. No other major irreversible impacts are expected to occur. Any topographic changes created by pipeline installation or construction of related facilities would be unnoticeable. Some minor amounts of diesel fuel and gasoline would be used by construction equipment. There should be no irreversible impact to any cultural resources.

Irretrievable resource commitments are those that are lost for a period of time. An example would be the loss of wildlife habitat or grazing use until a disturbed site is reclaimed and revegetation success is achieved. Because the disturbance associated with the installation of the pipeline would be quite minor, no irretrievable impacts are expected as a result of this project.

Table 5-3 Summary of Impacts by Alternative		
Resource	No-Action Alternative	Proposed Action Alternative
Soils and Watershed Resources	Continued natural soil loss over region. Increased intensity of current land uses of the area, especially new roads and off-road vehicle use would increase erosion rates and lower soil productivity over time.	An additional 59 acres of disturbance to add 118 tons/year of sediment to baseline no-action alternative soil loss in Green River system. This amounts to an additional 0.001 inch/year/acre thickness of soil loss. [(2 tons) (2000 lb) (cu ft soil) (1 acre) (12 in)] [(acre) (ton) (1600 lb)(43,560 ft ²)(1 ft)]
Air Quality		
Fugitive Dust	Increased intensity of current land uses and traffic in area to cause temporary increases in fugitive dust.	Pipeline installation/construction traffic to cause 2-3 month increase in fugitive dust emissions along county roads.
Criteria Air Pollutant Emissions	Nearest gas compressor currently emitting criteria pollutants is over 20 miles away. No direct measurable effect to air quality in the area due to remoteness and low density of development, although incremental increases in the density of development could eventually cause measurable effects to air quality.	Additional NO _x emissions of 12.3 tons per year (TPY) and CO emissions of 11.7 TPY would be added to baseline emissions described under the no-action alternative. Under current conditions these emissions drop to within background levels less than a mile from compressor.
Hazardous Air Pollutant Emissions	No measurable effect.	Additional VOC emissions of 0.95 TPY; Hexane emissions of 0.79 TPY would be added to those described under the no-action alternative.
Visibility Effects on Dinosaur National Monument	None.	Negligible.
Visibility Effects on Arches National Park	None.	Negligible.
Vegetation		
Vegetation Disturbance	Increased intensity of current land uses in the area would have incremental detrimental effect over time.	Estimated 60.5 acres of direct vegetation disturbance, primarily in the big sagebrush vegetation communities but also some disturbance in the pinyon-juniper and mixed shrub vegetation communities.
Number of Threatened and Endangered Plants Lost	None.	None.
Impact to Sensitive Plants	None.	None.
Wildlife		
Habitat Loss	No immediate direct loss. Increased intensity of current land uses in the area would have incremental detrimental effect over time.	44.5 acres of big sagebrush; 6.2 acres of pinyon-juniper; 9.8 acres of mixed shrub.
Big Game (mule deer & elk)	Increased intensity of current land uses in the area could displace animals over time.	Direct displacement during day light hours during 2-3 month construction period.
Impacts to Threatened and Endangered Wildlife Species	Increased intensity of current land uses in the area would have incremental detrimental effect over time.	None.
Impacts to BLM Species of Concern	Increased intensity of current land uses in the area would have incremental detrimental effect over time.	Two sage grouse leks near pipeline; no construction planned between March 1 and June 1 to avoid direct adverse effects to breeding and nesting activities. Thirteen-lined ground squirrel and Utah milk snake have suitable habitat in area – construction activities could cause some inadvertent habitat disturbance and direct mortalities.
Recreation		

Table 5-3 Summary of Impacts by Alternative		
Resource	No-Action Alternative	Proposed Action Alternative
Impacts to Developed Recreational Facilities	None.	None. No developed recreational facilities in area.
Disruption to Recreational Opportunities in Undeveloped Areas	Other land uses expected to continue and increase in area. This could adversely affect opportunity for primitive recreational experience.	Impact depends on perspective of individual. Some may view primitive recreation (solitude and naturalness) diminished with pipeline.
Changes in Recreational Access to Undeveloped Areas	Other land uses expected to continue and increase in area. This could, over time, make it more difficult to access areas suitable for primitive recreational experience.	Construction activity during 2-3 month construction period would cause some minor traffic delays for users of Winter Ridge Road when pipeline road crossings are made.
Wilderness	There would be no additional impacts to wilderness values of naturalness, opportunities for solitude and primitive recreation, or special features. However, because roads have already been located here, impairment has already occurred. Should Congress designate the Winter Ridge as wilderness, the existing roads and wells would probably be cherry-stemmed from the area even if this action is not approved.	Although there would be minimal additional impact to wilderness values of naturalness, opportunities for solitude and primitive recreation, a new discretionary use would be introduced that would further constrain Congress from designating the area as wilderness. However, because roads have already been located here, impairment has already occurred. Should Congress designate the Winter Ridge as wilderness, the existing roads and wells would probably be cherry-stemmed from the area even if this action is not approved.

5.11 CUMULATIVE IMPACTS

5.11.1 Overview

This section addresses the cumulative impacts associated with the Wolf Point project. Cumulative impacts are those effects on the environment that result from the incremental impact of the proposed action when added to the past, present, and reasonably foreseeable future actions (see Section 4.0, Reasonable Foreseeable Development).

5.11.2 Cultural Resources

Future activities such as oil and gas exploration and development, ORV and other recreational uses, and livestock grazing could cause increased impact to the region's cultural resources.

5.11.3 Soil and Watershed Resources

Any land disturbing activity which removes soil material would affect soil biota (including soil crusts), soil functions, erosion rates and watershed resources. Current land use practices that contribute to cumulative effects on soil and watershed resources include oil and gas exploration and development, increased ORV traffic, and increased recreational use for hunting and other dispersed recreation.

With expanding oil and gas activity in the region, sediment yield is likely to increase due to the disturbance associated with such activity. Existing and proposed roads are the activities of highest concern with regard to potential sediment yield. Each acre of disturbance adds to a cumulative effect by increasing erosion, destroying native vegetation, and through the

invasion of undesired plant species. Each new development would result in additional erosion of approximately 2 tons per acre per year, until successfully reclaimed.

The projected reasonable foreseeable development scenario of adding 41 wells and 41 miles of new roads and pipelines would produce approximately 131 new acres of disturbance (based on 2 acre disturbance per well and 1.2 acre disturbance per mile of new road and pipeline). The increased land disturbance would add approximately 262 tons of sediment per year to the Green River system (based on 2 tons per acre per year). If all of this sediment is delivered to the Green River annually, this increased sedimentation amounts to less than 0.001 percent of the estimated annual sediment load (3 to 5 million tons) carried by the Green River (The Green River system drains approximately 40,590 sq. mi.)

Hunting and antler hunting are the primary recreational activities in the area. Increased surface disturbance and soil erosion from four-wheeling activity would result in increased sedimentation and damage to drainage channels.

5.11.4 Air Quality

The increase in emissions due to the proposed action would be negligible and would not result in any adverse effects on the human environment based on federal NAAQS. However, in the context of cumulative impact analyses, each site-specific increase in pollutant emissions, including that of the proposed action, adds to cumulative air quality impacts within the Uinta Basin and surrounding region. Current land use practices that contribute to cumulative effects on air quality include all oil and gas exploration and development in the CIAA, increased ORV traffic, and increased recreational use for hunting and other dispersed recreation.

An inventory of regulated emissions sources was conducted for an area within 30 miles of the proposed Wolf Point Project. These sources were compared to the projected emissions from the Wolf Point Project. See Table 5-4, Other Air Emission Sources. No air emission sources were located within 20 miles of the Wolf Point Project; however, three sources were located 20 to 30 miles from the project site (Utah DEQ 2001). Under the 1,245-acre well spacing development scenario discussed in Section 5.3, approximately 1 new compressor would need to be added to the CIAA. Under the 320-acre well spacing development scenario, approximately 1 to 4 compressors would need to be added (depending on compressor size and pipeline size). Under either scenario, the increased emissions from an additional 1 to 4 compressor engines is not expected to cause a measurable decline in air quality within the CIAA when combined with existing cumulative sources of emissions in the area.

Table 5-4 Permitted Air Emission Sources Contributing to Cumulative Impacts							
Distance From Site (miles)	Owner Name	Facility Name	CO (tons/yr)	NO_x (tons/yr)	PM₁₀ (tons/yr)	SO_x (tons/yr)	VOC (tons/yr)
20 to 30	Canyon Gas Resources Inc.	Westwater Compressor Station	198.4	42.2	0.1	0.01	8.6
20 to 30	Canyon Gas Resources Inc.	San Arroyo Plant	39.8	394.1	1.9	0.03	36.0
20 to 30	Mid-America Pipeline Company	Dragon Station	43.9	28.2	3.1	0.14	5.1
Total Emissions			282.1	464.5	5.1	0.18	49.6
At Project Site	Bonneville Fuels Corp.	Wolf Point Project	11.7	12.3	<1.0	<0.1	2.8

5.11.5 Vegetation

Current land use practices that contribute to cumulative impacts on vegetation communities include oil and gas exploration and development, grazing, increased off-road vehicle traffic, and increased recreational use for hunting and other dispersed recreation. The worst-case RFD for oil and gas exploration and development would result in an estimated 262 acres of new disturbance associated with 41 new gas wells and their supporting pipeline and road infrastructure. There would be an additional unquantified increase in surface disturbance and vegetation removal from ORV traffic and increased recreational use in the CIAA. Grazing levels and disturbance from grazing would remain relatively constant. The surface disturbance and vegetation removal associated with the Proposed action (less than 9.5 acres) would contribute to the overall increase in soil disturbance and vegetation removal from these other activities. This soil disturbance and vegetation removal would alter the vegetation community structure and result in long-term habitat loss to site-specific endemic plants, birds, big game, and small game animals.

5.11.6 Wildlife

Historic and ongoing land uses in the area have resulted in the loss of some native wildlife habitats. Current land use practices that contribute to cumulative effects on vegetation communities and wildlife habitats include oil and gas exploration and development, grazing, increased off-road vehicle traffic, and increased recreational use for hunting and other dispersed recreation. Increased and ongoing human presence in the area would cause cumulative effects to big game wildlife through vehicle mortalities, off-road vehicle use, increased legal or illegal hunting, noise effects, and harassment. In the context of cumulative impacts, any proposed disturbance, especially linear disturbance such as new roads or

pipeline rights-of-way, incrementally add to wildlife habitat losses and overall habitat fragmentation within the project area and surrounding region.

5.11.7 Recreation

Cumulative impacts on recreational resources would result from the combined effects of normal increase in recreational demand in the area and the increased intensity of other land use practices. Current land use practices that contribute to cumulative impacts to recreation include increased oil and gas exploration and development, grazing, and increased off-road vehicle traffic.

With more individuals moving into the region, and more use of the region by people from distant populated centers such as the Denver/Front Range and the Salt Lake City/Wasatch Front, undeveloped recreational use such as off-road vehicle use, hunting, site seeing, etc., would be expected to increase. The Book Cliffs divide area, with primary access to the area from the Seep Ridge Road (also along Willow Creek up Bull Canyon Road and on the Winter Ridge road), continues to increase in popularity as a primitive recreation destination.

Areas of potential oil and gas drilling that would be tied to the RFD would encompass approximately 13,116 acres. Under optimistic economic circumstances, 41 new wells would likely be operating in the CIAA along with 41 new miles of roads and pipelines (see Section 5.3.1, Oil and Gas Development). Although limited in scope, this increased oil and gas activity would incrementally reduce recreational opportunities for a primitive recreation experience in the CIAA.

5.11.8 Wilderness Resources

There is the potential for cumulative effects on wilderness resources and values that result from the combined effects of current land use practices, including oil and gas exploration and development, and increased recreational use for hunting, antler collecting and other dispersed recreation. There is approximately 10,616 acres within the Winter Ridge WSA that has pre-FLPMA oil and gas leases that may qualify as VERs and eventually be developed for oil and gas production. Depending on future market conditions and technology, it is reasonable to expect that pre-FLPMA oil and gas leases that qualify as VERs would be exercised and developed within the Winter Ridge WSA, which would incrementally degrade the wilderness characteristics of the Winter Ridge WSA. As additional infrastructure is developed in the area, the economics of additional drilling and expanded development on pre-FLPMA leases that qualify as VERs become more favorable. The other land uses associated with the Winter Ridge WSA (dispersed recreation including hunting and antler collecting) also are expected to incrementally increase over time, potentially degrading the wilderness characteristics of the Winter Ridge WSA. In addition, in spite of BLM's efforts to protect wilderness values, some degradation may occur in the Winter Ridge WSA by increased ORV use.

6.0 COMMENT ANALYSIS

A Wolf Point Pipeline Project draft EA was released by the BLM for public review and comment on September 24, 2002. The public comment review period for this draft EA extended from the time of release to the close of business at the BLM Vernal District Office on October 29, 2002. The BLM received 32 written responses from individuals, organizations, and government agencies. Of these responses, 3 came from commentors from Uintah County, Utah, 5 from commentors outside Uintah County, and 24 from commentors outside the state of Utah. The comments ranged in scope and content with the main focus on wildlife, wilderness, operational and cumulative effects issues. As a result of these comments, the BLM decided to re-examine the pipeline routing and re-issue another draft EA for the Wolf Point Pipeline Project.

7.0 MONITORING AND COMPLIANCE PLAN

The environmental protection measures proposed by the Applicant are set forth in Section 2.1.6, Application – Proposed Environmental Protection Measures. These include measures to protect cultural resources, prevent sediment and erosion control, avoid propagation of noxious and invasive weeds and prevent impacts to wildlife and sensitive animal species. Any additional mitigation and monitoring proposed for the Wolf Point project will be included in the Decision Record / Finding of No Significant Impact (FONSI).

8.0 LIST OF PREPARERS

The following consultants were involved in the preparation of the Wolf Point Project EA:

- Jon Holst – Principal-in-Charge
- Alan Czarnowsky – Engineer
- Jennifer Kathol – Recreation, Wilderness
- Steve Long – Soils and Vegetation
- Mike Phelan - Wildlife and Fisheries
- John Jankousky – Air Quality
- Rita Edinger – Word Processing
- Joe Nagengast - Graphics

The following BLM personnel were involved in the review of the Wolf Point Project EA:

- Jean Sinclear - Environmental Coordinator
- Kim Bartel - Recreation
- Bill Stroh - Wildlife and Fisheries
- Robert Sprecht - Vegetation and Range
- Steve Strong - Soils and Watersheds
- Ed Foresman – Minerals
- Maggie Kelsey - Wilderness

9.0 LIST OF AGENCIES, ORGANIZATIONS AND PERSONS CONSULTED

The following individuals, organizations, and governmental agencies were consulted regarding the proposed action and the information presented in this EA:

Agency/Organization	Individual	Position/Discipline
Utah Division of Environmental Quality – Division of Air Quality	David Prey Deborah McMurtrie	Air Quality
U.S. Fish & Wildlife Service	Jessica Gourley	Threatened or Endangered Fish & Wildlife
Utah Division of Wildlife Resources	Jack Lytle	Wildlife
Natural Resources Conservation Service	Robert Fish	Soils
Uintah County Roads Department	John Kay	County Roads
Private Landowner	Burton DeLambert	Land Use

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11.0 APPENDICES

The following two appendices are included with this Wolf Point EA Document:

- (1) December 14, 2001 Memorandum from Acting Field Supervisor, U.S. Fish and Wildlife Service to Vernal Field Office Manager, Bureau of Land Management.
- (2) History of Winter Ridge Wilderness Study Area in Relationship to the Wolf Point Project.

Appendix 2

History of Winter Ridge Wilderness Study Area (WSA) in Relationship to the Wolf Point Project

June, 1974. Lease UTU030112 was issued.

October, 1976. Congress passes Federal Land Policy and Management Act (FLPMA) requiring BLM to undertake a wilderness review of public lands.

April, 1979. Initial Wilderness Inventory Proposals released. Winter Ridge is proposed for intensive inventory.

August, 1979. Final Initial Inventory Decision released. Winter Ridge inventory unit is retained for intensive inventory.

April, 1980. BLM Intensive Wilderness Inventory, Proposed Wilderness Study Areas, Utah is released. Winter Ridge is identified as lacking wilderness character and proposed as non-WSA.

November, 1980. BLM Intensive Wilderness Inventory, Final Decision on Wilderness Study Areas, Utah is released. Utah State Director makes decision to not make Winter Ridge a WSA.

March, 1981. Utah State Director makes decision on inventory protests: Denies protests on Winter Ridge decision.

July, 1981. Application for permit to drill well 5-13-15-21 was approved, including development of .3 miles of road on lease. Existing roads were to be used for access off-lease, and no road ROW was required.

July, 1981. A road ROW was granted to access well 2-18-15-22. The EA for the road ROW action stated that the no action alternative is not legally possible and that Coseka Resources has the right to access their lease despite the pending appeal status of the Winter Ridge Inventory Unit. The EA cited a U.S. District Court Decision made by Judge Edwing T. Kerr, Cheyenne, Wyoming on November 7, 1980, permitting exploration, development and production to take place on a pre-FLPMA lease within a Wilderness Study Area.

August 25, 1981. Application for permit to drill well 2-18-15-22 was approved.

November, 1981. Lease held by production.

January 20, 1982. Notice of completion of well 2-18-15-22

April, 1983. Interior Board of Land Appeals makes decision on inventory appeals. BLM's Winter Ridge decision involving approximately 43,963 acres, was set aside and remanded to BLM for further consideration. IBLA stated that "The BLM decision as it related to naturalness must be set aside and the unit remanded to allow BLM to reassess naturalness with special attention to whether boundary adjustments might eliminate imprints."

July, 1983. Upon reassessment, BLM announces proposal to establish 40,049 acres as Winter Ridge WSA

October, 1983. BLM announces final decision to establish 42, 462 acres as Winter Ridge WSA.

November, 1983. Decision to establish 42, 462 acres as Winter Ridge WSA is effected.

August, 1984. Notice of completion of well 5-13-15-21

October, 1991. Utah Statewide Wilderness Study Report - Record of Decision dated 10/18/91, signed by Manuel Liyan, Jr. Secretary of the Department of the Interior. Regarding Winter Ridge WSA, 0 acres recommended for wilderness and 42, 462 acres recommended for non-wilderness.